

FINAL

**ENVIRONMENTAL ASSESSMENT
FOR MQ-1 LAUNCH AND
RECOVERY ELEMENT
TRAINING OPERATIONS
AT
SOUTHERN CALIFORNIA
LOGISTICS AIRPORT
VICTORVILLE, CALIFORNIA**

**163^d RECONNAISSANCE WING
CALIFORNIA AIR NATIONAL GUARD**

**NATIONAL GUARD BUREAU
ENVIRONMENTAL DIVISION**

FEBRUARY 2008

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ACRONYMS

°F	degrees Fahrenheit	LID	Low Impact Design
163 ARW	163 rd Air Refueling Wing	LOS	level of service
163 RW	163 rd Reconnaissance Wing	LRE	Launch and Recovery Element
452 AMW	452 nd Air Mobility Wing	LUSTIS	Leaking Underground Storage Tank Information System
ACHP	Advisory Council on Historic Preservation	MCAGCC	Marine Corps Air Ground Combat Center
ADT	average daily trip	MDAQMD	Mojave Desert Air Quality Management District
AFB	Air Force Base	MGS	Mohave ground squirrel
AFI	Air Force Instruction	MOA	Military Operating Area
AGL	above ground level	MQ	multi-role
AICUZ	Air Installation Compatible Use Zone	MSL	mean sea level
AIRFA	American Indian Religious Freedom Act	NAAQS	National Ambient Air Quality Standards
ANG	Air National Guard	NAGPRA	Native American Graves Protection and Repatriation Act
APCD	Air Pollution Control District	NAHC	Native American Heritage Commission
ARB	Air Reserve Base	NEPA	National Environmental Policy Act
ASD	average sortie duration	NGB	National Guard Bureau
ATC	air traffic control	NHPA	National Historic Preservation Act
BASH	Bird-Aircraft Strike Hazard	NO ₂	nitrogen dioxide
BEA	Bureau of Economic Analysis	NO _x	nitrogen oxides
BLM	Bureau of Land Management	NPDES	National Pollutant Discharge Elimination System
BMP	Best Management Practice	NRHP	National Register of Historic Places
CAA	Clean Air Act	O ₃	ozone
CAAQS	California Ambient Air Quality Standards	Pb	lead
CARB	California Air Resources Board	PM ₁₀	particulate matter less than 10 microns in diameter
CDFG	California Department of Fish and Game	PM _{2.5}	particulate matter less than 2.5 microns in diameter
CEQ	Council on Environmental Quality	R-	Restricted Airspace
CFR	Code of Federal Regulations	RCRA	Resource Conservation and Recovery Act
CMP	Congestion Management Plan	ROG	reactive organic gases
CNEL	Community Noise Equivalent Level	RPZ	runway protection zone
COA	Certificate of Authorization	RQ	reconnaissance
CWA	Clean Water Act	RWQCB	Regional Water Quality Control Board
dBA	A-weighted decibel	SCLA	Southern California Logistics Airport
DoD	Department of Defense	SF	square feet
DTSC	Department of Toxic Substances Control	SHPO	State Historic Preservation Office
EA	Environmental Assessment	SIP	State Implementation Plan
EIAP	Environmental Impact Analysis Process	SO ₂	sulfur dioxide
EIR	Environmental Impact Report	SR	State Route
EIS	Environmental Impact Statement	UAV	unmanned aerial vehicle
EO	Executive Order	USACE	U.S. Army Corps of Engineers
ERP	Environmental Restoration Program	USAF	U.S. Air Force
ESA	Endangered Species Act	USC	U.S. Code
FAA	Federal Aviation Administration	USDA	U.S. Department of Agriculture
FAR	Federal Aviation Regulation	USDOT	U.S. Department of Transportation
FICON	Federal Interagency Committee on Noise	USEPA	U.S. Environmental Protection Agency
FONSI	Finding of No Significant Impact	USFWS	U.S. Fish and Wildlife Service
FTD	Field Training Detachment	USGS	U.S. Geological Survey
FTU	Formal Training Unit	VFR	visual flight rules
GCS	Ground Control Station	VOC	volatile organic compound
HCP	Habitat Conservation Plan	VVUHSD	Victor Valley Union High School District
HUD	Department of Housing and Urban Development		
I-	Interstate		
IFR	instrument flight rules		
IICEP	Interagency and Intergovernmental Coordination for Environmental Planning		
INM	Integrated Noise Model		

**FINDING OF NO SIGNIFICANT IMPACT FOR
MQ-1 LAUNCH AND RECOVERY ELEMENT TRAINING OPERATIONS
AT SOUTHERN CALIFORNIA LOGISTICS AIRPORT,
CALIFORNIA AIR NATIONAL GUARD
VICTORVILLE, CALIFORNIA**

1.0 INTRODUCTION

The California Air National Guard (ANG) proposes to establish a mission that would train crews in the maintenance and operation of the MQ-1 Predator unmanned aerial vehicle (UAV). The activities would be coordinated and supported by personnel of the 163^d Reconnaissance Wing (163 RW), formerly the 163^d Air Refueling Wing, located at March Air Reserve Base (ARB) in Riverside, California. Although the operational mission, classroom training, and administrative functions associated with this mission would occur at March ARB, the Launch and Recovery Element (LRE) site is proposed to be established at a geographically separate location, the Southern California Logistics Airport (SCLA), in Victorville, California, or alternatively at El Mirage Airport, near Adelanto, California.

2.0 PROPOSED ACTION

The Proposed Action includes the establishment of a LRE site at SCLA for the Predator UAV training mission that would be implemented by the 163 RW, a California ANG unit located at March ARB. Academic and classroom training would be conducted at March ARB and the LRE would supplement that ground-based training.

The LRE is the flying training component for the 163 RW Predator mission and must be located at an airfield that is geographically separate from March ARB, primarily because the Federal Aviation Administration (FAA) does not currently authorize UAV operations in airspace over densely populated urbanized areas. The California ANG would require approximately 25,000 total square feet of classroom, administrative, and hangar space to accomplish the training mission at SCLA. Ultimately, a purpose-built facility, meeting requirements for hangar, administrative, and classroom space would be constructed along SCLA's Taxiway C which has been previously proposed for extension and reconfiguration. Until the construction of a purpose-built facility at SCLA, the 163 RW would lease the existing Hush House and utilize 2 to 3 modular

buildings for office, administrative, and classroom space. The modular buildings, as well as a portable aircraft sun shade and ground control station, would be placed on existing pavement adjacent to the Hush House.

Key elements of a newly established California ANG LRE site at SCLA would include:

- Expanding an existing building (or possibly installing a new modular structure for interim use until a purpose-built facility is constructed)
- Constructing a hangar along the proposed Taxiway C extension to replace the interim facilities specifically designed to support the Predator Formal Training Unit (FTU) mission
- Increasing local runway and regional airspace use
- Shuttling approximately 10 support personnel from March ARB per day
- Obtaining a Certificate of Authorization (COA) from the FAA to allow UAVs to pass through Class D airspace between the LRE site and existing training airspaces, or “Predator boxes” above Edwards Air Force Base (AFB)
- Increasing the frequency of Predator UAV operations in designated training airspace areas by as many as 280 sorties per year (the number expected to be covered by the COA); the maximum future frequency envisioned would be 524 training sorties and 200 LRE events (a total of approximately 7,000 hours) conducted by the California ANG per year

At SCLA, implementation of the Proposed Action would also require acquisition of approximately 1.67 acres by the California ANG from SCLA, in the form of a new lease.

3.0 ALTERNATIVES CONSIDERED

Alternative 1: New LRE at El Mirage Airport. If this alternative were selected, the California ANG would establish a new LRE site at EL Mirage Airport. The 163 RW’s Predator mission could be supported by an existing hangar facility at El Mirage Airport or an identical facility already approved for construction. Currently, property associated with El Mirage Airport is privately owned, and approximately 640 acres (including the airfield) is leased by businesses for multiple uses, including maintenance and operation of UAVs. As is the case with the UAVs launched from SCLA, these UAVs are also operated primarily in

designated airspace associated with Edwards AFB. No cargo or other commercial aircraft operations are currently conducted at El Mirage Airport; operations are limited to small private aircraft and testing and training flights associated with the UAVs.

Alternative 2: No-Action Alternative. If the No-Action Alternative were selected, the California ANG would not implement the Proposed Action. Under the No-Action Alternative, no land would be acquired and no new LRE site would be established. Current training limitations would remain and the 163 RW's ability to fully accomplish its mission in an effective manner would be limited. However, because Council on Environmental Quality (CEQ) regulations stipulate that the No-Action Alternative be analyzed to assess any environmental consequences that may occur if the Proposed Action is not implemented, this alternative is carried forward for analysis in this Environmental Assessment (EA).

4.0 ALTERNATIVES CONSIDERED AND DISMISSED

Alternative 3: Use of Other Location Alternative. Under this alternative, the California ANG would establish a new LRE site at an alternative location. Several other regional locations were initially evaluated for potential suitability to support LRE activities associated with the Predator UAV. Primary screening criteria applied to these sites included:

- Population density (appropriate for a COA from the FAA)
- Runway dimensions (minimum 5,000 feet by 90 feet)
- Vehicular commute time from March ARB (maximum 90 minutes)
- Flight time to FTU authorized restricted airspace entry point (maximum 60 minutes)

After analyzing several potential locations for the establishment of a new LRE site, only SCLA and EL Mirage Airport satisfied all applicable screening criteria.

5.0 ANTICIPATED ENVIRONMENTAL EFFECTS

Air Quality. Under implementation of the Proposed Action, fugitive dust would be generated from construction activities, including grading. In accordance with Mojave Desert Air Quality Management District (MDAQMD) guidelines, implementation of control measures would be required during construction

activities associated with the Proposed Action and these measures would reduce impacts to less than significant levels. Similarly, combustion emissions from vehicles used during construction are considered less than significant based on MDAQMD thresholds. Once operational, air emissions would occur from fuel combustion related to MQ-1 aircraft operations. Operational emissions were calculated to be below significance thresholds set by the MDAQMD. Implementation of the Proposed Action would have less than significant impacts on air quality.

Noise. MQ-1 operations associated with the Proposed Action would result in a negligible increase in the amount of acreage exposed to the 65 CNEL contour (i.e., by less than 1 percent). Additionally, the increase in aircraft operations resulting from implementation of the Proposed Action would not affect any sensitive receptors or introduce any new residences to the 65 CNEL contour. Therefore, noise impacts from aircraft operations related to the Proposed Action would be less than significant. Proposed construction activities would generate noise exposure above typical ambient levels at the installation; however, noise generation would be short-term and would be reduced through the use of equipment sound mufflers and restriction of construction activity to normal working hours (i.e., between 7:00 AM and 5:00 PM). Since none of the new facilities would comprise significant noise generators, be noise sensitive, or be located in an incompatible noise exposure area, long-term operations-related noise impacts would not be significant.

Land Use. Implementation of the Proposed Action would not result in any impacts to land use at SCLA. The 163 RW's interim and ultimate Proposed Action sites are both located in an area designated by the SCLA Community Plan Element for Airport and Support Facilities land use. Further, the interim and ultimate Proposed Action sites are located in the Sideline Safety Zone and Traffic Pattern Safety Zone, respectively, and do not conflict with either safety zone's prohibited uses. Implementation of the Proposed Action would not result in any off-site incompatible land use from noise associated with MQ-1 flying operations.

Geological Resources. Potential geologic impacts associated with the Proposed Action at SCLA would be limited to ground-disturbing activities (i.e., construction). Minor impacts would result from the construction of structures.

However, construction activities associated with the Proposed Action would occur on previously disturbed or developed land, which is capable of supporting such development. No areas of shallow or exposed bedrock are present at the ultimate Proposed Action site. Additionally, both the interim and ultimate sites are relatively level and do not present any topographical constraints. Implementation of fugitive dust control measures during construction would limit impacts to soils that might result from construction activities. Therefore, impacts to geological resources would be less than significant.

Water Resources. Ground-disturbing activities associated with the Proposed Action would include new construction. Site preparation activities (e.g., grading) and construction would result in temporary exposure and compaction of soils, affecting surface water drainage flow patterns and percolation rates. During construction phases, applying Best Management Practices such as silt fencing and suspension of construction during rainy periods would mitigate the effects of increased surface water runoff and sedimentation. Because the Proposed Action would result in the disturbance of more than 1 acre during construction activities, a National Pollutant Discharge Elimination System (NPDES) General Construction Stormwater Permit and a NPDES General Industrial Stormwater Permit would be required in addition to development of a Stormwater Pollution Prevention Plan. Conformance to all Federal, state, and city requirements related to storm water pollution prevention during construction activities would mitigate potentially adverse impacts on stormwater runoff quality. In accordance with guidance from the Lahontan Regional Water Quality Control Board, implementation of the Proposed Action would incorporate principles of Low Impact Development that would reduce surface runoff and impacts to receiving waters in the post-construction period for both the interim and ultimate Proposed Action sites. Once operational, no impacts to surface water would occur. New construction and paving associated with the Proposed Action would slightly reduce surface areas available for groundwater recharge. However, the reduction in surface area and resultant increase in stormwater drainage would be negligible. In addition, no construction or facilities modification projects would occur within the 100-year floodplain. Therefore, the Proposed Action would not have an adverse impact on water resources.

Biological Resources. Habitat-disturbing activities associated with the Proposed Action would include new construction. Due to the lack of sensitive species or native plant species and the disturbed nature of existing vegetation conditions at both the interim and ultimate project sites, proposed construction would have less than significant impacts on vegetation or the habitat it may provide.

Transportation and Circulation. Proposed construction projects would result in minor, temporary impacts on SCLA's traffic circulation due to increased traffic associated with construction vehicles and temporary detours resulting from road closures. However, these short-term temporary impacts would not have a significant impact on SCLA's transportation network. Due to the periodic nature of the 163 RW's mission at SCLA, impacts would not be significant and any adverse effects to transportation would be temporary.

Visual Resources. Construction projects associated with the Proposed Action would be visually consistent with existing structures at the airport. SCLA is a relatively low sensitivity visual environment, primarily because only a few areas of SCLA can be viewed from off-property; therefore, impacts to regional visual resources would be less than significant upon implementation of the Proposed Action.

Cultural Resources. No National Register of Historic Places-listed or eligible archaeological resources have been recorded at the installation. The State Historic Preservation Office (SHPO) has previously concurred with these findings for other projects at SCLA; however, Section 106 consultation with SHPO was conducted and documented as part of this EA. Although the proposed construction sites have been heavily disturbed during establishment and subsequent development and use of SCLA, the potential exists—however slight—for currently buried remains to be uncovered during ground-disturbing activities (i.e., construction). If such resources were uncovered during development at any of the proposed project locations, activities would be suspended in the immediate location of the discovery until a qualified archaeologist could determine the significance of the resource(s). Further, there are no known federally recognized Native American lands or resources at SCLA. Consultation with all relevant Native American groups has been conducted as part of the interagency consultation process for previous projects at SCLA as well as this EA; no interest in the project site has been expressed from consultation

with appropriate Native American groups. If Native American lands or resources are determined to be present near any of the proposed project locations, activities would be suspended until a qualified archaeologist and Native American representatives could determine the significance of the resource(s). Therefore, impacts with regard to cultural resources would be less than significant.

Socioeconomics. Economic activity associated with the proposed construction activities, such as hiring of temporary laborers and purchasing of materials for construction, would provide short-term economic benefits to the local economy. However, these short-term beneficial impacts would be negligible on a regional scale. No long-term changes in economic activity associated with the 163 RW or SCLA would occur upon implementation of the Proposed Action (e.g., there would be no changes in unit staffing levels). Therefore, implementation of the Proposed Action would not result in a significant impact to regional or local socioeconomic characteristics.

Environmental Justice and Protection of Children. The communities near SCLA (City of Adelanto and City of Victorville) have a higher percentage of residents living under the poverty level than county, state, and national levels. Further, the percentage of minority residents in the City of Adelanto is the highest among the five geographic areas examined for this analysis. However, since no significant, adverse environmental impacts associated with the Proposed Action would occur, no populations (minority, low-income, or otherwise) would be disproportionately adversely impacted and no significant impact with regard to environmental justice would result. Implementation of the Proposed Action would not result in increased environmental health risks or in safety risks. Further, no on-site housing or facilities for children exist in or adjacent to areas associated with the 163 RW's interim or ultimate proposed LRE sites. Therefore, implementation of the Proposed Action would not result in increased or disproportionate environmental health risks or safety risks to children.

Hazardous Materials and Wastes. Upon implementation of the Proposed Action, the 163 RW would ultimately construct a purpose-built facility that meets requirements for hangar, classroom, and administrative space. For both interim and ultimate facilities proposed at SCLA, implementation of the Proposed Action

would increase the storage of aircraft fuels on site; however, the fuel storage and refueling systems would be constructed according to all current regulations regarding hazardous materials storage and secondary containment. In addition to fuels, a temporary increase in the storage of hazardous materials and waste would occur throughout the construction phases of the project. Hazardous materials associated with construction activities would also be used according to all current regulations regarding storage and secondary containment. Hazardous waste would be disposed of in accordance with existing hazardous waste management plans, permits, policies, and procedures. Therefore, impacts would be less than significant.

Safety. Historical mishap and Bird-Aircraft Strike Hazard data relevant to the SCLA is not available at this time; however, bird-aircraft strikes present a potential threat to 163 RW aircraft due to SCLA's location beneath the Pacific Flyway. Although impacts regarding aircraft mishaps and bird-aircraft strikes cannot be evaluated at this time, the safety risks are reduced because per FAA regulations the UAVs fly only over sparsely populated areas and do not rely on an onboard human operator. Neither the interim nor ultimate facilities proposed by the 163 RW present an incompatible land use with regard to established safety zones at SCLA. The Proposed Action would not result in a change in shape or shift in location of established safety zones and no new facilities would be constructed within established Runway Protection Zones. Therefore, no land use conflict with regard to airfield safety would result from implementation of the Proposed Action.

Airspace Management. Implementation of the 163 RW's mission would result in an increase in the number of operations in SCLA's airspace. In 2006, total aircraft operations at SCLA were more than 60,000 and were all handled by SCLA's Air Traffic Control Tower. Operations associated with the Proposed Action would represent a relatively small increase (8.5 percent) over the existing conditions and no changes to airspace configuration or management procedures would be required. Therefore, increased operations associated with the Proposed Action would not have a significant impact to airspace management.

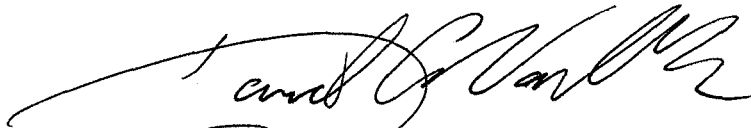
6.0 PUBLIC NOTICE

The National Environmental Policy Act (NEPA), 40 Code of Federal Regulations (CFR) 1500-1508, and 32 CFR 989 require public review of the EA before

approval of the Finding of No Significant Impact (FONSI) and implementation of the Proposed Action. A Notice of Availability for public review of the Draft EA was published in the Victorville Daily Press on Sunday, 9 December 2007. The Draft EA was available for public review at the Victorville Public Library, 15011 Circle Drive, Victorville, California. The public review period lasted for 30 days and no public comments were received; therefore, no such comments were incorporated as part of the Final EA.

7.0 FINDING OF NO SIGNIFICANT IMPACT

After careful review of the potential impacts of this Proposed Action, I have concluded that the action's implementation would not have a significant impact on the quality of the human or natural environment or generate significant controversy. Accordingly, the requirements of NEPA and CEQ regulations, and 32 CFR 989, et seq. have been fulfilled and an Environmental Impact Statement is not necessary and will not be prepared.


DAVID C. VAN GASBECK
Executive Secretary

Environmental, Safety, and Occupational Health Committee


Date

**ENVIRONMENTAL ASSESSMENT
FOR MQ-1 LAUNCH AND RECOVERY ELEMENT TRAINING
OPERATIONS
AT SOUTHERN CALIFORNIA LOGISTICS AIRPORT
VICTORVILLE, CALIFORNIA**

CONTENTS

<u>SECTION</u>	<u>TITLE</u>	<u>PAGE</u>
	ACRONYMS.....	inside front cover
	FINDING OF NO SIGNIFICANT IMPACT	1
1	OVERVIEW.....	1-1
1.1	INTRODUCTION.....	1-1
1.2	BACKGROUND	1-1
1.3	PROPOSED PREDATOR TRAINING.....	1-2
1.4	PURPOSE OF THE PROPOSED ACTION.....	1-3
1.5	NEED FOR THE PROPOSED ACTION	1-4
1.6	LOCATION.....	1-4
1.7	SUMMARY OF ENVIRONMENTAL STUDY REQUIREMENTS	1-4
1.7.1	National Environmental Policy Act	1-6
1.7.2	Endangered Species Act.....	1-6
1.7.3	Clean Air Act and Conformity Requirements	1-7
1.7.4	Water Resources Regulatory Requirements.....	1-7
1.7.5	Cultural Resources Regulatory Requirements	1-7
1.7.6	Other Executive Orders.....	1-9
1.7.7	Interagency and Intergovernmental Coordination for Environmental Planning	1-9
2	DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES.....	2-1
2.1	SUMMARY OF PROPOSED ACTION.....	2-1
2.2	PROPOSED ACTION: NEW LRE AT SOUTHERN CALIFORNIA LOGISTICS AIRPORT	2-1
2.3	ALTERNATIVE 1: NEW LRE AT EL MIRAGE AIRPORT	2-5
2.4	ADDITIONAL ALTERNATIVE LOCATIONS.....	2-5
2.5	NO-ACTION ALTERNATIVE.....	2-5
3	AFFECTED ENVIRONMENT	3-1
3.1	AIR QUALITY	3-1
3.1.1	Definition of Resource.....	3-1
3.1.1.1	Criteria Pollutants	3-3
3.1.1.2	Clean Air Act Amendments	3-4

CONTENTS (continued)

<u>SECTION</u>	<u>TITLE</u>	<u>PAGE</u>
3.1.2	Existing Conditions	3-5
3.1.2.1	Climate.....	3-5
3.1.2.2	Local Air Quality.....	3-5
3.1.2.3	Emissions at SCLA and El Mirage Airport	3-6
3.2	NOISE	3-7
3.2.1	Noise in the Airfield Environment.....	3-9
3.2.2	Existing Conditions	3-10
3.2.2.1	Regional Setting.....	3-10
3.2.2.2	SCLA	3-10
3.2.2.3	El Mirage Airport.....	3-12
3.3	LAND USE	3-14
3.3.1	Definition of Resource.....	3-14
3.3.2	Existing Conditions	3-14
3.3.2.1	Regional Land Use.....	3-14
3.3.2.2	Surrounding Land Use.....	3-14
3.3.2.3	On Site Land Use.....	3-16
3.4	GEOLOGICAL RESOURCES.....	3-18
3.4.1	Definition of Resource.....	3-18
3.4.2	Existing Conditions	3-18
3.4.2.1	Regional Setting.....	3-18
3.4.2.2	SCLA	3-19
3.4.2.3	El Mirage Airport.....	3-22
3.5	WATER RESOURCES	3-23
3.5.1	Definition of Resource.....	3-23
3.5.2	Existing Conditions	3-24
3.5.2.1	Regional Setting.....	3-24
3.5.2.2	SCLA	3-25
3.5.2.3	El Mirage Airport.....	3-26
3.6	BIOLOGICAL RESOURCES	3-27
3.6.1	Definition of Resource.....	3-27
3.6.2	Existing Conditions	3-27
3.6.2.1	Regional Setting.....	3-27
3.6.2.2	SCLA	3-28
3.6.2.3	El Mirage Airport.....	3-31
3.7	TRANSPORTATION AND CIRCULATION.....	3-32
3.7.1	Definition of Resource.....	3-32
3.7.2	Existing Conditions	3-32
3.7.2.1	Regional Transportation	3-32
3.7.2.2	Local Transportation and Circulation.....	3-32

CONTENTS (continued)

<u>SECTION</u>	<u>TITLE</u>	<u>PAGE</u>
3.8	VISUAL RESOURCES	3-37
3.8.1	Definition of Resource	3-37
3.8.2	Regional Visual Character	3-37
3.8.2.1	SCLA	3-37
3.8.2.2	El Mirage Airport	3-38
3.9	CULTURAL RESOURCES	3-39
3.9.1	Definition of Resource	3-39
3.9.2	Existing Conditions	3-40
3.9.2.1	Regional History	3-40
3.9.2.2	SCLA	3-41
3.9.2.3	Cultural Resources at El Mirage Airport	3-42
3.10	SOCIOECONOMICS	3-44
3.10.1	Definition of Resource	3-44
3.10.2	Existing Conditions	3-44
3.10.2.1	Population	3-44
3.10.2.2	Job Growth and Unemployment	3-45
3.11	ENVIRONMENTAL JUSTICE	3-49
3.11.1	Definition of Resource	3-49
3.11.2	Existing Conditions	3-49
3.11.2.1	Minority and Low-Income Populations	3-49
3.11.2.2	Protection of Children	3-50
3.12	HAZARDOUS MATERIALS AND WASTES	3-52
3.12.1	Definition of Resource	3-52
3.12.2	Existing Conditions	3-52
3.12.2.1	Hazardous Material and Wastes at SCLA	3-52
3.12.2.2	Hazardous Material and Waste at El Mirage Airport	3-55
3.13	SAFETY	3-56
3.13.1	Definition of Resource	3-56
3.13.2	Existing Conditions	3-56
3.13.2.1	Aircraft Mishaps	3-56
3.13.2.2	Safety Zones at SCLA	3-57
3.13.2.3	Safety Zones at El Mirage Airport	3-60
3.13.2.4	Bird-Aircraft Strike Hazard	3-60
3.14	AIRSPACE MANAGEMENT	3-63
3.14.1	Definition of Resource	3-63
3.14.1.1	Controlled Airspace	3-63
3.14.1.2	Uncontrolled Airspace	3-65
3.14.1.3	Special Use Airspace	3-66

CONTENTS (continued)

<u>SECTION</u>	<u>TITLE</u>	<u>PAGE</u>
	3.14.2 Existing Conditions	3-66
	3.14.2.1 SCLA	3-66
	3.14.2.2 El Mirage Airport.....	3-69
4	ENVIRONMENTAL CONSEQUENCES	4-1
4.1	AIR QUALITY	4-1
4.1.1	Approach to Analysis.....	4-1
4.1.2	Impacts	4-2
4.1.2.1	Proposed Action.....	4-2
4.1.2.2	Alternative 1: New LRE at El Mirage Airport	4-5
4.1.2.3	Alternative 2: No-Action Alternative.....	4-5
4.2	NOISE	4-6
4.2.1	Approach to Analysis.....	4-6
4.2.2	Impacts	4-6
4.2.2.1	Proposed Action.....	4-6
4.2.2.2	Alternative 1: New LRE at El Mirage Airport	4-8
4.2.2.3	Alternative 2: No-Action Alternative.....	4-8
4.3	LAND USE	4-11
4.3.1	Approach to Analysis.....	4-11
4.3.2	Impacts	4-11
4.3.2.1	Proposed Action.....	4-11
4.3.2.2	Alternative 1: New LRE at El Mirage Airport	4-11
4.3.2.3	Alternative 2: No-Action Alternative.....	4-11
4.4	GEOLOGICAL RESOURCES.....	4-12
4.4.1	Approach to Analysis.....	4-12
4.4.2	Impacts	4-12
4.4.2.1	Proposed Action.....	4-12
4.4.2.2	Alternative 1: New LRE at EL Mirage Airport	4-13
4.4.2.3	Alternative 2: No-Action Alternative.....	4-13
4.5	WATER RESOURCES	4-14
4.5.1	Approach to Analysis.....	4-14
4.5.2	Impacts	4-14
4.5.2.1	Proposed Action.....	4-14
4.5.2.2	Alternative 1: New LRE at El Mirage Airport	4-15
4.5.2.3	Alternative 2: No-Action Alternative.....	4-16
4.6	BIOLOGICAL RESOURCES	4-17
4.6.1	Approach to Analysis.....	4-17
4.6.2	Impacts	4-17
4.6.2.1	Proposed Action.....	4-17

CONTENTS (continued)

<u>SECTION</u>	<u>TITLE</u>	<u>PAGE</u>
	4.6.2.2 Alternative 1: New LRE at El Mirage Airport	4-17
	4.6.2.3 Alternative 2: No-Action Alternative.....	4-18
4.7	TRANSPORTATION AND CIRCULATION.....	4-19
4.7.1	Approach to Analysis.....	4-19
4.7.2	Impacts	4-19
	4.7.2.1 Proposed Action.....	4-19
	4.7.2.2 Alternative 1: New LRE at El Mirage Airport	4-20
	4.7.2.3 Alternative 2: No-Action Alternative.....	4-20
4.8	VISUAL RESOURCES	4-21
4.8.1	Approach to Analysis.....	4-21
4.8.2	Impacts	4-21
	4.8.2.1 Proposed Action.....	4-21
	4.8.2.2 Alternative 1: New LRE at El Mirage Airport	4-21
	4.8.2.3 Alternative 2: No-Action Alternative.....	4-21
4.9	CULTURAL RESOURCES	4-22
4.9.1	Approach to Analysis.....	4-22
4.9.2	Impacts	4-22
	4.9.2.1 Proposed Action.....	4-22
	4.9.2.2 Alternative 1: New LRE at El Mirage Airport	4-23
	4.9.2.3 Alternative 2: No-Action Alternative.....	4-23
4.10	SOCIOECONOMICS	4-24
4.10.1	Approach to Analysis.....	4-24
4.10.2	Impacts	4-24
	4.10.2.1 Proposed Action.....	4-24
	4.10.2.2 Alternative 1: New LRE at El Mirage Airport	4-24
	4.10.2.3 Alternative 2: No-Action Alternative.....	4-24
4.11	ENVIRONMENTAL JUSTICE AND PROTECTION OF CHILDREN.....	4-25
4.11.1	Approach to Analysis.....	4-25
4.11.2	Impacts	4-25
	4.11.2.1 Proposed Action.....	4-25
	4.11.2.2 Alternative 1: New LRE at El Mirage Airport	4-25
	4.11.2.3 Alternative 3: No-Action Alternative.....	4-26
4.12	HAZARDOUS MATERIALS AND WASTES	4-27
4.12.1	Approach to Analysis.....	4-27
4.12.2	Impacts	4-27
	4.12.2.1 Proposed Action.....	4-27
	4.12.2.2 Alternative 1: New LRE at El Mirage Airport	4-27
	4.12.2.3 Alternative 2: No-Action Alternative.....	4-28
4.13	SAFETY	4-29

CONTENTS (continued)

<u>SECTION</u>	<u>TITLE</u>	<u>PAGE</u>
4.13.1	Approach to Analysis	4-29
4.13.2	Impacts	4-29
4.13.2.1	Proposed Action	4-29
4.13.2.2	Alternative 1: New LRE at El Mirage Airport	4-29
4.13.2.3	Alternative 2: No-Action Alternative	4-30
4.14	AIRSPACE MANAGEMENT	4-31
4.14.1	Approach to Analysis	4-31
4.14.2	Impacts	4-31
4.14.2.1	Proposed Action	4-31
4.14.2.2	Alternative 1: New LRE at El Mirage Airport	4-31
4.14.2.3	Alternative 2: No-Action Alternative	4-32
5	CUMULATIVE IMPACTS	5-1
6	SUMMARY OF FINDINGS	6-1
7	SPECIAL PROCEDURES	7-1
8	REFERENCES	8-1
9	LIST OF PREPARERS	9-1

APPENDICES

- A IICEP Distribution List
- B Air Emission Factors and Assumptions

LIST OF FIGURES

<u>NUMBER</u>	<u>TITLE</u>	<u>PAGE</u>
1-1	Regional Location, Southern California.....	1-5
2-1	Vicinity Map, Southern California Logistics Airport, Victorville, California.....	2-2
2-2	Proposed Action Project Site, Southern California Logistics Airport, Victorville, California	2-4
2-3	Alternative A Project Site, El Mirage Airport, Adelanto, California	2-6
3-1	California and National Ambient Air Quality Standards and Measured Emission Levels (2006-2007), Victorville, California	3-2
3-2	Existing CNEL Noise Contours at SCLA	3-11
3-3	Existing CNEL Noise Contours at El Mirage Airport	3-13
3-4	Land Use in the Vicinity of Southern California Logistics Airport	3-15
3-5	Land Use within the Southern California Logistics Airport Specific Plan Area	3-17
3-6	Surface Soils in the Vicinity of the Proposed Action Project Site, Southern California Logistics Airport.....	3-21
3-7	Regional Transportation Network, Southern California.....	3-33
3-8	Transportation Network in the Vicinity of Southern California Logistics Airport.....	3-34
3-9	Transportation Network in the Vicinity of El Mirage Airport	3-36
3-10	Annual Earnings per Industrial Sector, San Bernardino County (2005) .	3-47
3-11	Environmental Justice Data	3-51
3-12	Runway Protections Zones SCLA	3-58
3-13	Migratory Flyways over the United States.....	3-61
3-14	FAA Airspace Classification.....	3-64
3-15	Airspace in the Vicinity of Southern California Logistics Airport and El Mirage Airport.....	3-67
4-1	Projected Noise Contours at SCLA	4-9
4-2	Projected Noise Contours at El Mirage Airport	4-10
5-1	Cumulative Projects Planned at Southern California Logistics Airport...	5-2

LIST OF TABLES

<u>NUMBER</u>	<u>TITLE</u>	<u>PAGE</u>
2-1	Comparison of Locations Considered for Establishment of an LRE	2-7
3-1	Sound Levels of Typical Noise Sources and Noise Environments	3-8
3-2	Special Status Species in the Western Mojave Desert	3-29
3-3	San Bernardino County Employment by Industry (1995, 2000, and 2005)	3-46
4-1	Significant Emission Thresholds	4-2
4-2	Projected Combustion Emissions for Construction Activities	4-4
4-3	Projected Operational Emissions	4-4
4-4	Summary of Emissions Associated with the Proposed Action	4-5

SECTION 1 OVERVIEW

1.1 INTRODUCTION

The California Air National Guard (ANG) proposes to establish a mission that would train crews in the maintenance and use of the MQ-1 Predator unmanned aerial vehicle (UAV). The activities would be coordinated and supported by personnel of the 163^d Reconnaissance Wing (163 RW), formerly the 163^d Air Refueling Wing (163 ARW), located at March Air Reserve Base (ARB) in Riverside, California. Although key elements of the mission, including limited remote in-flight operations, classroom training, and administrative functions would occur at March ARB, the Launch and Recovery Element (LRE) site is proposed to be established at a geographically separate location, the Southern California Logistics Airport (SCLA), in Victorville, California, or alternatively at El Mirage Airport, near Adelanto, California.

March ARB currently hosts several flying missions - including KC-135R and C-17 operations associated with the host 452^d Air Mobility Wing's (452 AMW's) refueling and cargo transport missions, respectively. The California ANG's 163 RW is the primary tenant organization at March ARB.

This Environmental Assessment (EA) - prepared in compliance with the National Environmental Policy Act (NEPA) of 1969 - evaluates potential environmental impacts associated with the implementation of this Proposed Action, specifically the establishment and use of the LRE site at SCLA, and identified feasible alternatives.

1.2 BACKGROUND

Powered by a 4-cylinder Rotax engine that relies on 100-octane aviation fuel, the MQ-1 Predator aircraft is a medium-altitude UAV, measuring 27 feet in length with a 48.7-foot wingspan. The Predator UAV itself is the aircraft component of a system that includes sensors, a Ground Control Station (GCS), and a Predator Primary Satellite Link. Remotely controlled, the Predator UAV can deploy for operations lasting up to 24 hours, gathering intelligence, surveillance, and reconnaissance (ISR). Airspace areas used for this training are often referred to as "Predator boxes" and facilitate full operation of the Predator system (e.g., launch, "long loiter" flight patterns, extended target areas, landing / recovery,

etc.); the Predator has an operational ceiling of 25,000 feet mean sea level (MSL), but more typically operates between 10,000 and 15,000 feet MSL.

In service since 1995, the Predator's capabilities were expanded in 2001 when it was modified for armed reconnaissance. This change resulted in a change in the designation of the aircraft from RQ (reconnaissance) to MQ (multi-role). Currently, training for US Air Force (USAF) Predator crews is conducted at Nellis Air Force Base (AFB) and Creech AFB, both located in Nevada.

Within California, two Department of Defense (DOD) locations are currently equipped with infrastructure (including airspace) that supports UAV flight training: Edwards AFB and Marine Corps Air Ground Combat Center (MCAGCC) Twentynine Palms. Airspace areas in the Southern California region that are designated and approved for use by UAVs are associated with Edwards AFB (Restricted Airspace [R]-2502 and R-2515) and MCAGCC Twentynine Palms (R-2501); these are the airspace areas used by the Predator UAVs currently launched from both SCLA and El Mirage Airport. Launched UAVs – accompanied by “chase planes” (described below) – access this special use airspace under visual flight rules (VFR) via local Class D airspace (163 RW 2007).

1.3 PROPOSED PREDATOR TRAINING

The 163 RW was first assigned an MQ-1 Predator mission in 2006 and is currently implementing that mission, operating the UAVs overseas and controlling the aircraft remotely from a GCS located at March ARB; no flight training of the Predator UAV is currently conducted in airspace areas in the vicinity of March ARB and on-site training is limited to the operational mission and Formal Training Unit (FTU) and Field Training Detachment (FTD) school house training. Ultimately, it is anticipated that the 163 RW would receive an inventory of 14 MQ-1 Predators; however, some aircraft will be deployed and only three aircraft would be used for the flying training at any given time with the remaining aircraft stored at March ARB.

Training associated with the Proposed Action would be conducted quarterly and each session would last approximately 12 weeks, with approximately 4 weeks of classroom instruction and 8 weeks of flying training instruction at March ARB. It is anticipated that approximately 80 students would complete the FTU training syllabus each year, taught by 20 FTU instructors. The flying training part of the

FTU training syllabus will require approximately 200 sorties per year, with an average sortie duration (ASD) of 8 to 10 hours; however, operations associated with the Proposed Action would be limited to flight time to and from restricted airspaces and would not include operations within these restricted airspaces. Once within restricted airspace, control of the UAV would be handed over to the GCS at March AFB for training operations not associated with the Proposed Action. The LRE sorties will require approximately 32 sorties per year with an ASD of 3 to 5 hours, generating approximately 30 touch-and-go events per sortie. During FTU training sorties, in addition to the airborne UAVs, there is a requirement for a “chase plane” (e.g., a single-engine Cessna 182) to follow the UAV for observation and safety purposes – each chase plane would carry a pilot and an observer and would typically travel above and behind the airborne UAV to maintain visual contact while adhering to Federal Aviation Administration (FAA) regulations for separation distance. The chase plane would follow the UAV under VFR through Class D airspace to approved airspace (e.g., R-2502 above Edwards AFB) at which time the UAV could transition to instrument flight rules (IFR). If necessary or desired, the UAV – once in Class A airspace above 18,000 feet MSL – could travel to R-2501 above MCAGCC Twentynine Palms and conduct training operations there (163 RW 2007). Although the MQ-1 is capable of flying armed reconnaissance missions, no live ordnance would be stored or used in accomplishing the LRE mission at SCLA.

Although after-dark nighttime training flights are not currently proposed as part of the syllabus, the FAA Certificate of Authorization (COA) may allow early morning training flights in order for the unit to be able to capitalize on favorable weather conditions. (As stated previously, because the 163 RW would use established “Predator boxes” and no changes to airspace would be required, this EA will focus on the establishment of an LRE site only and analyses will address potential environmental implications at SCLA and El Mirage Airport.)

1.4 PURPOSE OF THE PROPOSED ACTION

Implementation of the Proposed Action would provide the infrastructure and operational support functions necessary to conduct the LRE of the Predator UAV training mission assigned to the 163 RW of the California ANG, which calls for the unit to establish a schoolhouse and training program that will produce qualified Predator crews for both the USAF and ANG. Ultimately, the purpose

of the action is to expand training capacity such that the DOD can efficiently and effectively deploy this important element of its inventory to remote locations in support of ongoing and future national priorities.

1.5 NEED FOR THE PROPOSED ACTION

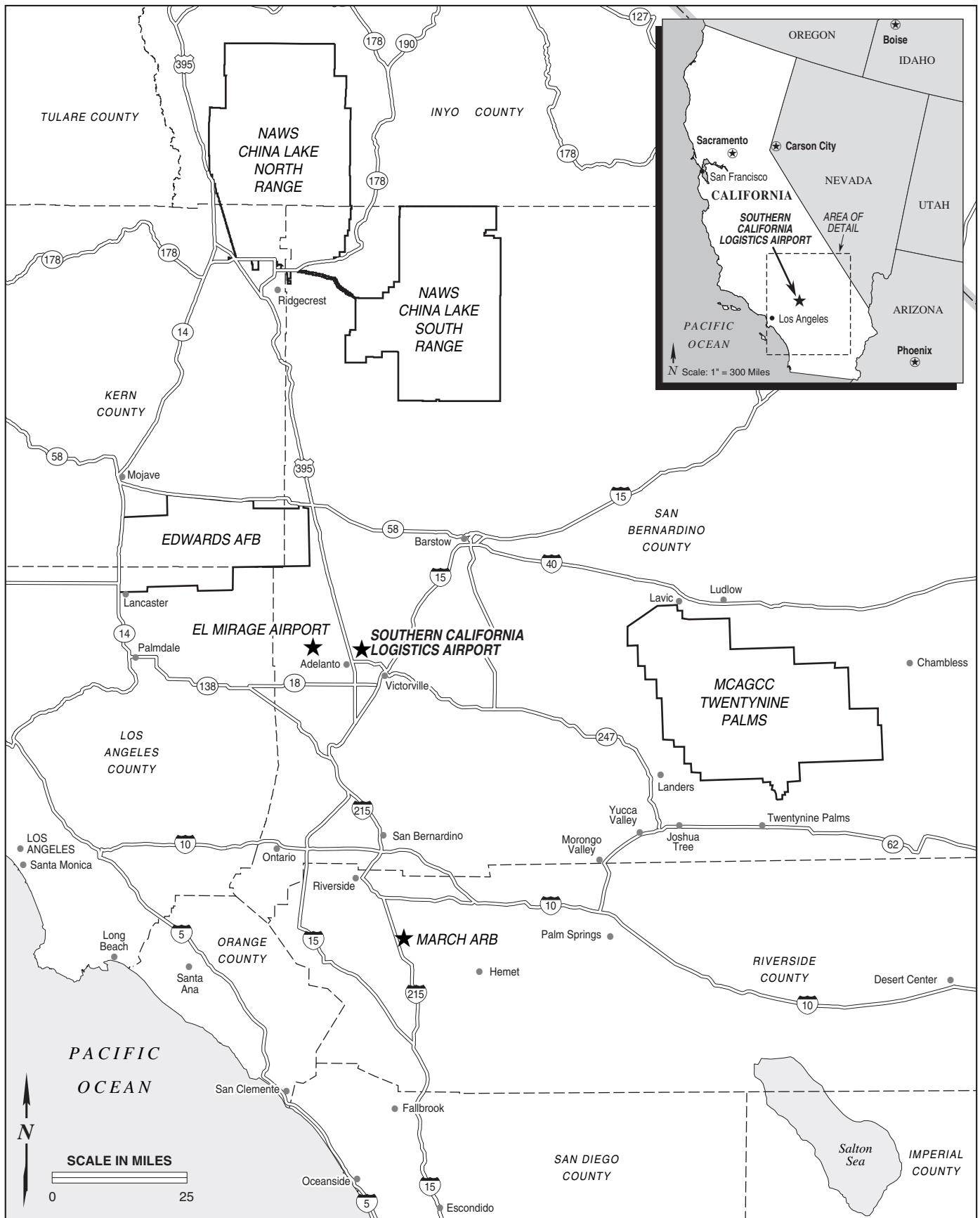
The need for the Proposed Action is driven primarily by the current shortage of appropriate ground-based infrastructure systems available to support the USAF and ANG Predator training mission. Currently, all Predator UAV training is conducted at one of two locations in Nevada. Further, within its National Airspace System, the FAA does not currently permit the operation of UAVs over urbanized areas such as that surrounding March ARB; therefore, the LRE training site needs to be established in a more sparsely populated area and at a location from which relatively direct access to a designated Predator training area is available (i.e., within a 60-minute flight of the LRE site). Further, the selected site needs to be located within a reasonable driving distance (i.e., no greater than 90 minutes) from March ARB.

1.6 LOCATION

March ARB is located approximately 70 miles east of Los Angeles, California in western Riverside County; the cities of Riverside, Moreno Valley, and Perris are located adjacent to the base (Figure 1-1). SCLA (formerly George AFB) is located approximately 8 miles northwest of the City of Victorville, California and is currently used for UAV launch and recovery activities (conducted by Boeing and other development entities), as well as for cargo transport and commercial aircraft storage and maintenance. El Mirage Airport is located near the small town of Adelanto, California and is also actively used for Predator UAV maintenance and operations, as well as other research, test, development, and evaluation activities.

1.7 SUMMARY OF ENVIRONMENTAL STUDY REQUIREMENTS

The Environmental Impact Analysis Process (EIAP) is the process by which Federal agencies facilitate compliance with environmental regulations. The primary legislation affecting these agencies' decision-making process is the National Environmental Policy Act (NEPA) of 1969. This act and other facets of the EIAP are described below.



EA

**Regional Location
Southern California**

**FIGURE
1-1**

1.7.1 National Environmental Policy Act

NEPA requires that Federal agencies consider potential environmental consequences of proposed actions. The law's intent is to protect, restore, or enhance the environment through well-informed federal decisions. The Council on Environmental Quality (CEQ) was established under NEPA for the purpose of implementing and overseeing federal policies as they relate to this process. In 1978, the CEQ issued *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act* (40 Code of Federal Regulations [CFR] §1500-1508 [CEQ 1978]). These regulations specify that an Environmental Assessment (EA) be prepared to:

- briefly provide sufficient analysis and evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI);
- aid in an agency's compliance with NEPA when no EIS is necessary; and
- facilitate preparation of an EIS when one is necessary.

Further, to comply with other relevant environmental requirements (e.g., the Safe Drinking Water Act, Endangered Species Act [ESA], and National Historic Preservation Act [NHPA]) in addition to NEPA, and to assess potential environmental impacts, the EIAP and decision-making process for the proposed action involves a thorough examination of all environmental issues pertinent to the action proposed for the 163 RW.

To comply with NEPA and other pertinent environmental requirements, and to assess impacts on the environment, the decision-making process includes a study of environmental issues related to the proposed mission establishment associated with the 163 RW.

1.7.2 Endangered Species Act

The ESA of 1973 (16 USC §§ 1531-1544, as amended) established measures for the protection of plant and animal species that are federally listed as threatened and endangered, and for the conservation of habitats that are critical to the continued existence of those species. Federal agencies must evaluate the effects of their proposed actions through a set of defined procedures, which can include the preparation of a Biological Assessment and can require formal consultation with the U.S. Fish and Wildlife Service (USFWS) under Section 7 of the Act.

1.7.3 Clean Air Act and Conformity Requirements

The Clean Air Act (CAA) (42 USC §§ 7401–7671, as amended) provided the authority for the U.S. Environmental Protection Agency (USEPA) to establish nationwide air quality standards to protect public health and welfare. Federal standards, known as the National Ambient Air Quality Standards (NAAQS), were developed for six criteria pollutants: ozone (O₃), nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), particulate matter, and lead (Pb). The Act also requires that each state prepare a State Implementation Plan (SIP) for maintaining and improving air quality and eliminating violations of the NAAQS. Under the CAA Amendments of 1990, Federal agencies are required to determine whether their undertakings are in conformance with the applicable SIP and demonstrate that their actions will not cause or contribute to a new violation of the NAAQS; increase the frequency or severity of any existing violation; or delay timely attainment of any standard, emission reduction, or milestone contained in the SIP. The USEPA has set forth regulations 40 CFR 51, Subpart W, that require the proponent of a proposed action to perform an analysis to determine if its implementation would conform with the SIP.

1.7.4 Water Resources Regulatory Requirements

The Clean Water Act (CWA) of 1977 (33 USC §§ 1251 *et seq.*) regulates pollutant discharges that could affect aquatic life forms or human health and safety. Section 404 of the CWA, and Executive Order (EO) 11990, *Protection of Wetlands*, regulate development activities in or near streams or wetlands. Section 404 also regulates development in streams and wetlands and requires a permit from the U.S. Army Corps of Engineers (USACE) for dredging and filling in wetlands. EO 11988, *Floodplain Management*, requires federal agencies to take action to reduce the risk of flood damage; minimize the impacts of floods on human safety, health, and welfare; and to restore and preserve the natural and beneficial values served by floodplains. Federal agencies are directed to consider the proximity of their actions to or within floodplains.

1.7.5 Cultural Resources Regulatory Requirements

The NHPA of 1966 (16 USC § 470) established the National Register of Historic Places (NRHP) and the Advisory Council on Historic Preservation (ACHP) which outlined procedures for the management of cultural resources on Federal

property. Cultural resources can include archaeological remains, architectural structures, and traditional cultural properties such as ancestral settlements, historic trails, and places where significant historic events occurred. NHPA requires Federal agencies to consider potential impacts to cultural resources that are listed, nominated to, or eligible for listing on the NRHP; designated a National Historic Landmark; or valued by modern Native Americans for maintaining their traditional culture. Section 106 of NHPA requires Federal agencies to consult with the appropriate State Historic Preservation Office (SHPO) if their undertaking might affect such resources. *Protection of Historic and Cultural Properties* (36 CFR 800 [1986]) provided an explicit set of procedures for Federal agencies to meet their obligations under the NHPA, which includes inventorying of resources and consultation with SHPO.

Executive Order (EO) 13007, “Indian Sacred Sites,” directs Federal land (any land or interests in land owned by the United States, including leasehold interests held by the United States, except Indian trust lands) managing agencies to accommodate access to, and ceremonial use of, Indian sacred sites [any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian tribe (an Indian or Alaska Native tribe, band, nation, Pueblo, village, or community that the Secretary of the Interior acknowledges to exist as an Indian tribe pursuant to Public Law No. 103-454, 108 Stat. 4791, and “Indian” refers to a member of such an Indian tribe) or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion] provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site.

The American Indian Religious Freedom Act (AIRFA) (42 USC § 1996) established Federal policy to protect and preserve the rights of Native Americans to believe, express, and exercise their traditional religions, including providing access to sacred sites. The Native American Graves Protection and Repatriation Act (NAGPRA) (25 USC §§ 3001–3013) requires consultation with Native American Tribes prior to excavation or removal of human remains and certain objects of cultural importance.

1.7.6 Other Executive Orders

Additional regulatory legislation that potentially applies to the implementation of this proposal includes guidelines promulgated by EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, to ensure that citizens in either of these categories are not disproportionately affected. Additionally, potential health and safety impacts that could disproportionately affect children are considered under the guidelines established by EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*.

1.7.7 Interagency and Intergovernmental Coordination for Environmental Planning

Interagency and Intergovernmental Coordination for Environmental Planning (IICEP) is a federally mandated process for informing and coordinating with other governmental agencies regarding proposed actions. As detailed in 40 CFR § 1501.4(b), CEQ regulations require intergovernmental notifications prior to making any detailed statement of environmental impacts. Through the IICEP process, the ANG notifies relevant Federal, state, and local agencies and allows them sufficient time to make known their environmental concerns specific to a proposed action. Comments and concerns submitted by these agencies during the IICEP process are subsequently incorporated into the analysis of potential environmental impacts conducted as part of the EA.

SECTION 2

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

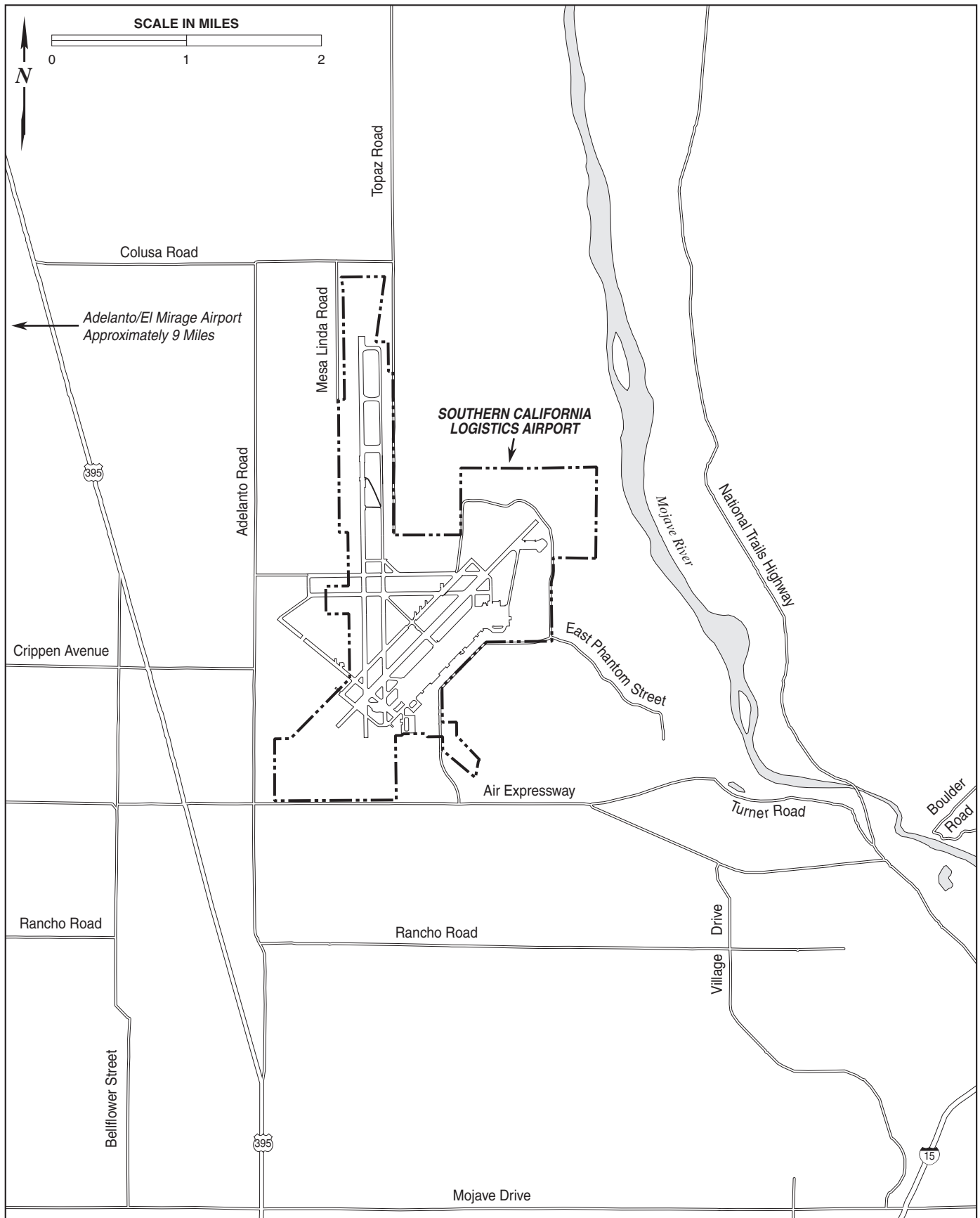
2.1 SUMMARY OF PROPOSED ACTION

The Proposed Action assessed in this Environmental Assessment (EA) is associated with the establishment of a Launch and Recovery Element (LRE) at Southern California Logistics Airport (SCLA) for the Predator unmanned aerial vehicle (UAV) training mission that would be implemented by the 163^d Reconnaissance Wing (163 RW), a California Air National Guard (ANG) unit located at March Air Reserve Base (ARB). Academic and classroom training would be conducted at March ARB and the LRE would supplement that ground-based training.

The LRE is the flying training component for the 163 RW Predator mission and must be located at an airfield that is geographically separate from March ARB, primarily because the Federal Aviation Administration (FAA) does not currently authorize UAV operations in airspace over densely populated urbanized areas. The two feasible locations being assessed for the establishment of this LRE site are: SCLA and El Mirage Airport. At either location, the California ANG would require approximately 25,000 total square feet of classroom, administrative, and hangar space to accomplish the training mission (NGB/A7CVN 2007). Ultimately at SCLA, a purpose-built facility, meeting requirements for hangar, administrative, and classroom space would be constructed along Taxiway C which has been previously proposed for extension and reconfiguration. Until the construction of a purpose-built facility at SCLA, the 163 RW would lease the existing Hush House and utilize 2 to 3 modular buildings for office, administrative, and classroom space. The modular buildings, as well as an aircraft sun shade and ground control station, would be placed on existing pavement adjacent to the Hush House.

2.2 PROPOSED ACTION: NEW LRE AT SOUTHERN CALIFORNIA LOGISTICS AIRPORT

SCLA, formerly George Air Force Base (AFB), is remotely located in California's Mojave Desert (Figure 2-1). The airfield complex and associated infrastructure once supported more than 300 US Air Force (USAF) F-4 aircraft and it remains an intact and operable airfield. Today, SCLA is a hub of activity for air freight



EA

**Vicinity Map
Southern California Logistics Airport
Victorville, California**

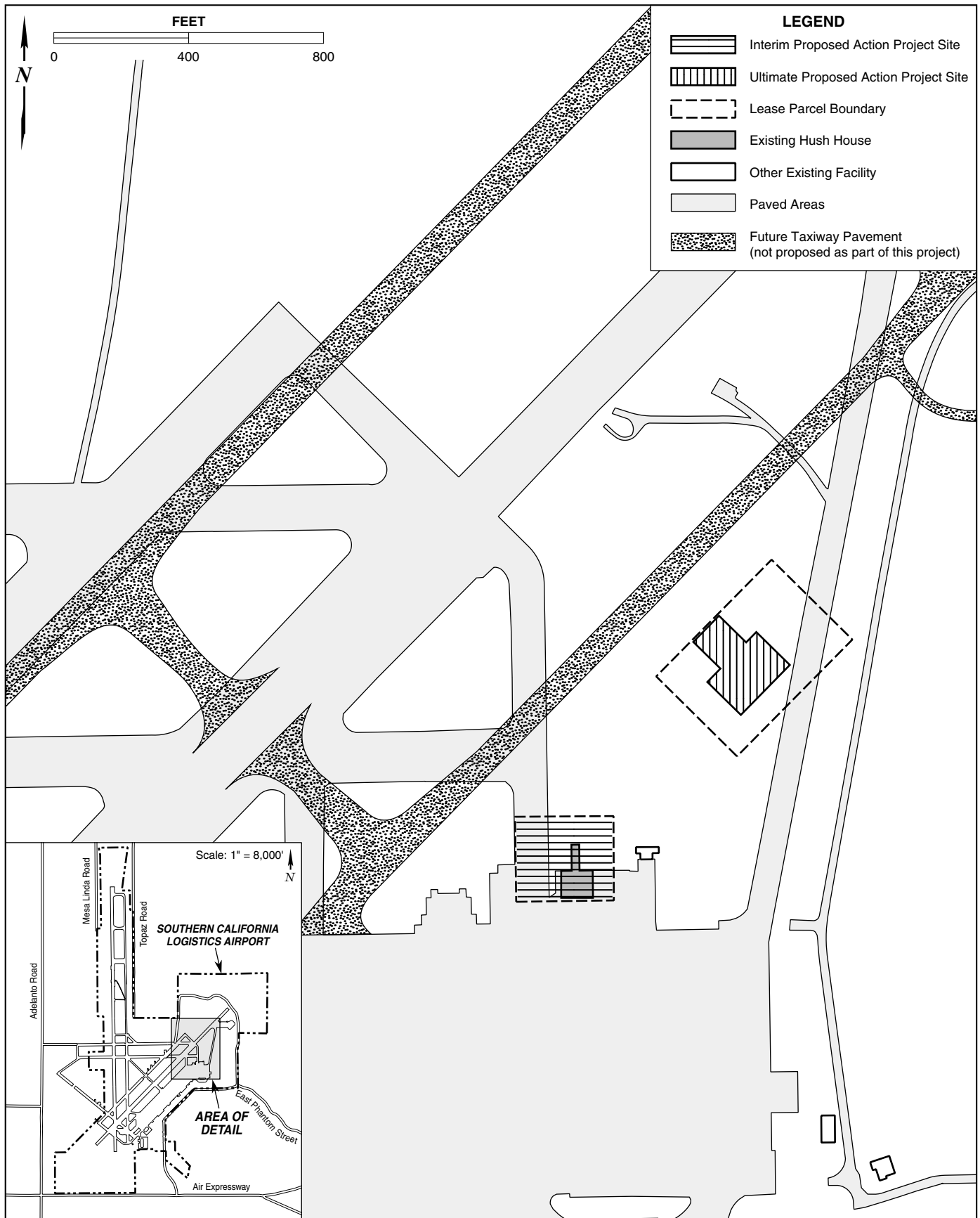
**FIGURE
2-1**

carriers and is a location at which commercial carriers store aircraft from their inventory that are not currently needed or require some maintenance or repair. In addition, the Boeing Corporation currently uses the SCLA airfield for the LRE of their UAV testing and training syllabus (e.g., for the Shadow and the Frontier UAVs); the airspace areas currently used by Boeing would also be used by the California ANG and no changes to the size or configuration of affected airspace would be required to accommodate the Proposed Action. Cumulatively among all crews, the SCLA airfield supports approximately 5,000 aircraft operations per month; the airfield has sufficient capacity to accommodate the relatively small increase in flight activities that would be associated with implementation of the Proposed Action.

Key elements of a newly established California ANG LRE site at SCLA would include:

- Expanding an existing building (or possibly installing a new modular structure for interim use until a purpose-built facility is constructed)
- Constructing a hangar along the SCLA proposed taxiway extension to replace the interim facilities specifically designed to support of the Predator Formal Training Unit (FTU) mission
- Increasing local runway and regional airspace use
- Shuttling approximately 10 support personnel from March ARB per day
- Obtaining a Certificate of Authorization (COA) from the Federal Aviation Administration (FAA) to allow UAVs to pass through Class D airspace between the LRE site and existing training airspaces, or “Predator boxes” above Edwards AFB
- Increasing the frequency of Predator UAV operations in designated training airspace areas by as many as 280 sorties per year (the number expected to be covered by the COA); the maximum future frequency envisioned would be 524 training sorties and 200 LRE events (a total of approximately 7,000 hours) conducted by the California ANG per year

At SCLA, implementation of the Proposed Action would also require acquisition of approximately 1.67 acres by the California ANG from SCLA, in the form of a new lease (Figure 2-2). In compliance with Air Force Instruction (AFI) 32-7066, *Environmental Baseline Surveys in Real Estate Transactions*,



EA

**Proposed Action Project Site
Southern California Logistics Airport
Victorville, California**

**FIGURE
2-2**

documentation to support this property transaction is being prepared concurrently with the EA.

2.3 ALTERNATIVE 1: NEW LRE AT EL MIRAGE AIRPORT

El Mirage Airport was initially built in the 1940s as an Auxiliary Field for the US Army Air Corps. After World War II, the airfield was used as a recreational airport and supported glider operations. Currently, property associated with El Mirage Airport is privately owned, and approximately 640 acres (including the airfield) is leased by businesses for multiple uses, including maintenance and operation of UAVs (e.g., USAF UAV acceptance testing and the US Army's MQ-1C Warrior UAV). As is the case with the UAVs launched from SCLA, these UAVs are also operated primarily in designated airspace associated with Edwards AFB. No cargo or other commercial aircraft operations are currently conducted at El Mirage Airport; operations are limited to small private aircraft and testing and training flights associated with the UAVs. The 163 RW's Predator mission could be supported by an existing hangar facility at El Mirage Airport or an identical facility already approved for construction (Figure 2-3) (General Atomics Aeronautics Systems 2006).

2.4 ADDITIONAL ALTERNATIVE LOCATIONS

Several other regional locations were initially evaluated for potential suitability to support LRE activities associated with the Predator UAV. Primary screening criteria applied to these sites included:

- Population density (appropriate for a COA from the FAA)
- Runway dimensions (minimum 5,000 feet by 90 feet)
- Vehicular commute time from March ARB (maximum 90 minutes)
- Flight time to FTU authorized restricted airspace entry point (maximum 60 minutes)

A summary of the screening criteria applied to these prospective locations – and an accompanying comparison of alternatives – is provided in Table 2-1.

2.5 NO-ACTION ALTERNATIVE

If the No-Action Alternative were selected, the California ANG would not implement the Proposed Action. Under the No-Action Alternative, no land would be acquired and no new LRE site would be established. Current training

Table 2-1. Comparison of Locations Considered for Establishment of an LRE

Potential LRE Location	Distance from Training Airspace (nautical miles)	Commute Distance from March ARB (miles)	Vehicular Commute Time (hours)	Airspace and Airfield Limitations	All Criteria Satisfied
SCLA	20	64	1.5	None	Yes
El Mirage Airport	20	65	1.5	Runway with overruns is acceptable length	Yes
NAWS China Lake	20	169	4.0	Must transit through R-2551	No
Gray Butte Airport	30	71	2.0	None	No
Edwards AFB (North Base)	34	138	3.0	Runway below minimums, congested air traffic patterns, access via R-2515	No
Bicycle Lake AAF (Fort Irwin)	37	119	2.3	Runways below minimums	No
March ARB	59	0	0	No COA from FAA, airspace over densely populated area	No
MCAGCC Twentynine Palms EAF	62	87	2.4	Runway below minimums	No
MCAS Camp Pendleton	95	58	1.5	Transit flight time more than 1.0 hour	No
Channel Islands ANG	106	125	2.7	Transit flight time more than 1.0 hour	No
MCAS Miramar	120	84	1.8	Transit flight time more than 1.0 hour	No
NAS North Island	131	99	2.2	Transit flight time more than 1.0 hour	No

Notes:

AAF – Army Airfield

ANGS – Air National Guard Station

EAF – Expeditionary Airfield

MCAGCC – Marine Corps Air Ground Combat Center

MCAS – Marine Corps Air Station

NAS – Naval Air Station

NAWC – Naval Air Warfare Station

limitations would remain and the 163 RW's ability to fully accomplish its mission in an effective manner would be limited. However, because Council on Environmental Quality (CEQ) regulations stipulate that the No-Action Alternative be analyzed to assess any environmental consequences that may occur if the Proposed Action is not implemented, this alternative will be carried forward for analysis in this EA.

SECTION 3

AFFECTED ENVIRONMENT

This section describes relevant existing environmental conditions for resources potentially affected by the Proposed Action and identified alternatives. In compliance with guidelines established by the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations, Air Force Instruction (AFI) 32-7061, and Title 32, Code of Federal Regulations (CFR) Part 989 (32 CFR 989), *Environmental Impact Analysis Process*, the description of the affected environment focuses on only those aspects potentially subject to impacts.

In the case of the Proposed Action for the 163^d Reconnaissance Wing (163 RW), the affected environment description is limited locally to the Southern California Logistics Airport (SCLA) and El Mirage Airport, and regionally to San Bernardino County. Resource descriptions focus on the following areas: air quality, noise, land use, geological resources, water resources, biological resources, transportation and circulation, visual resources, cultural resources, socioeconomics, hazardous materials and wastes, safety, and airspace management.

3.1 AIR QUALITY

3.1.1 Definition of Resource

Air quality in a given location is determined by the concentration of various pollutants in the atmosphere. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) are established for the criteria pollutants, which include ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter equal to or less than 10 microns in diameter (PM₁₀) and 2.5 microns in diameter (PM_{2.5}), and lead (Pb) (Figure 3-1). NAAQS and CAAQS represent maximum levels of background pollution that are considered safe, with an adequate margin of safety, to protect public health and welfare.

Pollutant	Averaging Time	California Standards ¹		Federal Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O ₃)	1 Hour	0.090 ppm (180 µg/m ³)	Ultraviolet Photometry	0.12 ppm (235 µg/m ³) ⁸	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m ³)		0.08 ppm (157 µg/m ³) ⁸		
Respirable Particulate Matter (PM ₁₀)	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		50 µg/m ³		
Fine Particulate Matter (PM _{2.5})	24 Hour	No Separate State Standard		35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	15 µg/m ³		
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m ³)	None	Non-Dispersive Infrared Photometry (NDIR)
	1 Hour	20 ppm (23 mg/m ³)		35 ppm (40 mg/m ³)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		—		
Nitrogen Dioxide (NO ₂)	Annual Arithmetic Mean	—	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m ³)	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.25 ppm (470 µg/m ³)		—		
Sulfur Dioxide (SO ₂)	Annual Arithmetic Mean	—	Ultraviolet Fluorescence	0.030 ppm (80 µg/m ³)	—	Spectrophotometry (Pararosaniline Method)
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (365 µg/m ³)	—	
	3 Hour	—		—	0.5 ppm (1300 µg/m ³)	
	1 Hour	0.25 ppm (655 µg/m ³)		—	—	
Lead ⁹	30 Day Average	1.5 µg/m ³	Atomic Absorption	—	—	—
	Calendar Quarter	—		1.5 µg/m ³	Same as Primary Standard	High Volume Sampler and Atomic Absorption

1 California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter – PM₁₀, PM_{2.5}, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2 National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM_{2.5}, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.

3 Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4 Any equivalent procedure which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

5 National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6 National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7 Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.

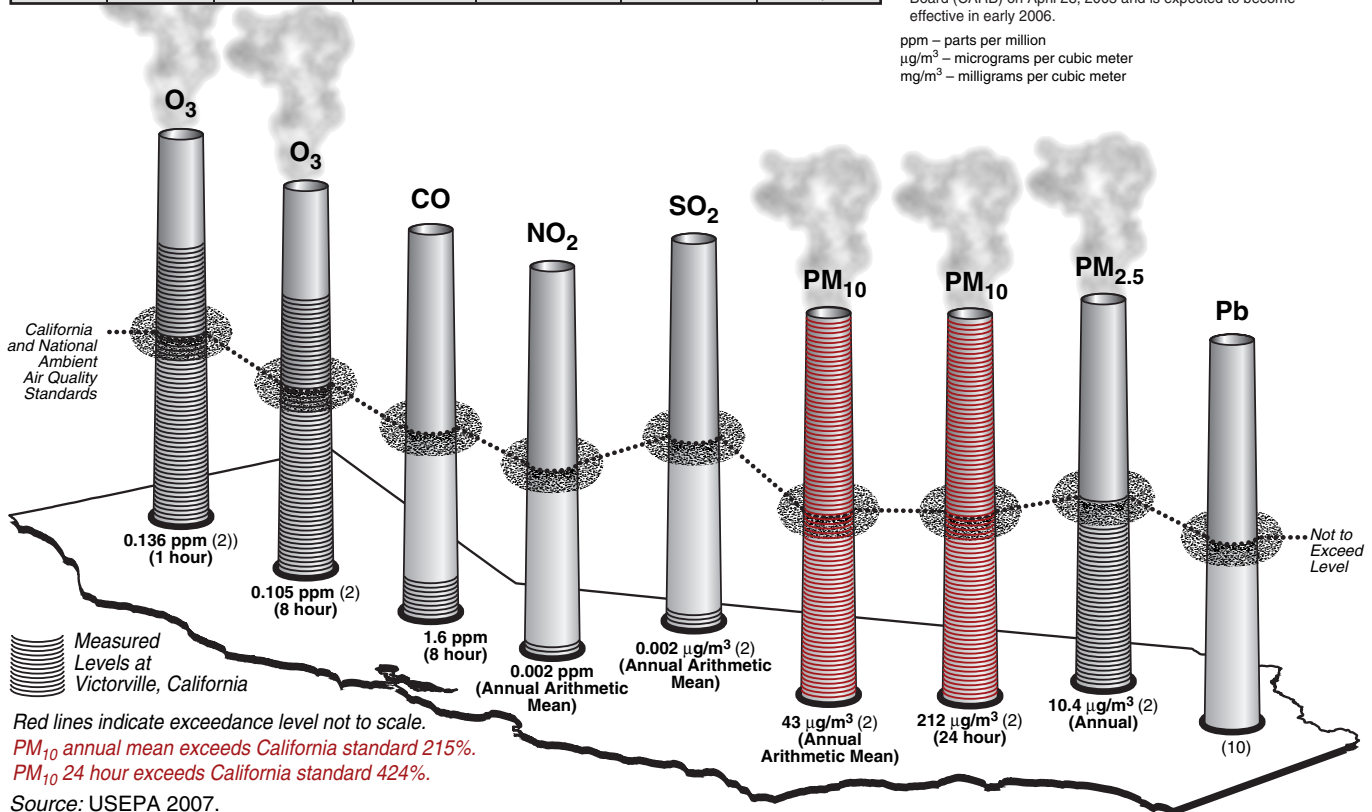
8 New federal 8-hour ozone and fine particulate matter standards were promulgated by U.S. EPA on July 18, 1997. Contact U.S. EPA for further clarification and current federal policies.

9 The ARB has identified lead and vinyl chloride as "toxic air contaminants" with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

10 Not monitored in Victorville.

*This concentration was approved by the California Air Resources Board (CARB) on April 28, 2005 and is expected to become effective in early 2006.

ppm – parts per million
µg/m³ – micrograms per cubic meter
mg/m³ – milligrams per cubic meter



3.1.1.1 Criteria Pollutants

Air quality is affected by stationary sources (e.g., urban and industrial development) and mobile sources (e.g., motor vehicles); consequently, increases in population and urbanization tend to affect air quality. Air quality at a given location is a function of several factors, including the quantity and type of pollutants emitted locally and regionally, and the dispersion rates of pollutants in the region. Primary factors affecting pollutant dispersion are wind speed and direction, atmospheric stability, temperature, the presence or absence of inversions, and topography.

Ozone (O₃). The majority of ground-level (or terrestrial) O₃ is formed as a result of complex photochemical reactions in the atmosphere involving volatile organic compounds (VOC), nitrogen oxides (NO_x), and oxygen. O₃ formulation is enhanced by warm temperatures and sunlight. O₃ is a highly reactive gas that damages lung tissue, reduces lung function, and sensitizes the lung to other irritants. Although *stratospheric* O₃ shields the earth from damaging ultraviolet radiation, terrestrial O₃ is a highly damaging air pollutant and is the primary source of smog.

Carbon Monoxide (CO). CO is a colorless, odorless, poisonous gas produced by incomplete burning of carbon in fuel. The health threat from CO is most serious for those who suffer from cardiovascular disease, particularly those with angina and peripheral vascular disease. Other probable risk groups include fetuses, young infants, and pregnant women.

Nitrogen Dioxide (NO₂). NO₂ is a brownish, highly reactive gas that can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections. Continued and repeated exposure to high concentrations of NO₂ may cause acute respiratory disease in children. NO₂ is an important precursor in the formation of O₃ or smog; therefore, control of NO₂ emissions is an important component of overall pollution reduction strategies. NO₂ is also a precursor in the formation of nitric acid and other aerosols, which may affect aquatic and terrestrial ecosystems. The two primary sources of NO₂ in the U.S. are fuel combustion and transportation.

Sulfur Dioxide (SO₂). SO₂ is emitted primarily from stationary source coal and oil combustion, steel mills, refineries, pulp and paper mills, and from non-

ferrous smelters. High concentrations of SO₂ may aggravate existing respiratory and cardiovascular disease; asthmatics and those with emphysema or bronchitis are the most sensitive to SO₂ exposure. SO₂ also contributes to acid rain, which can lead to the acidification of lakes and streams and damage trees.

Particulate Matter (PM₁₀ and PM_{2.5}). Particulate matter (PM) is a mixture of tiny particles that vary greatly in shape, size, and chemical composition, and can be comprised of metals, soot, soil, and dust. PM₁₀ includes larger, coarse particles, whereas PM_{2.5} includes smaller, fine particles. Sources of coarse particles include crushing or grinding operations, and dust from paved or unpaved roads. Sources of fine particles include all types of combustion activities (e.g., motor vehicles, power plants, wood burning) and certain industrial processes. Exposure to PM₁₀ and PM_{2.5} levels exceeding current standards can result in increased lung- and heart-related respiratory illness. The U.S. Environmental Protection Agency (USEPA) has concluded that finer particles are more likely to contribute to health problems than those greater than 10 microns in diameter. Both PM₁₀ and PM_{2.5} are monitored and regulated.

Airborne Lead (Pb). Airborne lead can be inhaled directly or ingested indirectly by consuming lead-contaminated food, water, or non-food materials such as dust or soil; fetuses, infants, and children are most sensitive to Pb exposure. Pb has been identified as a factor in high blood pressure and heart disease. Exposure to Pb has declined dramatically in the last 10 years as a result of the reduction of Pb in gasoline and paint, and the elimination of Pb from soldered cans.

3.1.1.2 Clean Air Act Amendments

The Clean Air Act Amendments of 1990 place most of the responsibility to achieve compliance with NAAQS on individual states. To this end, USEPA requires each state to prepare a State Implementation Plan (SIP). A SIP is a compilation of goals, strategies, schedules, and enforcement actions that will lead the state into compliance with all NAAQS and in California, CAAQS; changes to the compliance schedule or plan must be incorporated into the SIP. Areas not in compliance with a standard can be declared *nonattainment* areas by U.S. Environmental Protection Agency (USEPA) or the appropriate state or local agency. In order to reach *attainment*, 1- and 24-hour NAAQS may not be exceeded more than once per year. CAAQS may not be exceeded for O₃, CO, SO₂

(1 and 24 hour), NO₂, PM₁₀, PM_{2.5}, and visibility reducing particles. All other CAAQS may not be equaled or exceeded.

3.1.2 Existing Conditions

3.1.2.1 Climate

The climate in San Bernardino County is typified by hot, dry conditions. Summers are long and exceptionally hot, with average temperatures of 82 degrees Fahrenheit (°F) in Barstow and 77 °F in Victorville. Winters are quite warm despite an occasional series of days where nighttime temperatures fall below freezing. The average winter temperature is 47 °F in Barstow and 45 °F in Victorville. Rainfall is sparse throughout the year with a total average annual precipitation of 4 inches in Barstow and 5 inches in Victorville, of which approximately 30 percent falls between the months of April and September. Average humidity at dawn is approximately 50 percent while average humidity at midday is about 20 percent. Prevailing winds in the region come from the west; however, strong, dry winds come from varying directions throughout the year. The average wind speed during the summer is 8 miles per hour (mph) while wind speeds of over 12 mph, sufficient to lift and carry sand, are observed 36 percent of the year on average, with the strongest concentration of high wind speeds falling between March and June (U.S. Department of Agriculture [USDA] 1986).

3.1.2.2 Local Air Quality

SCLA and El Mirage Airport are located in a portion of the Mojave Desert Air Basin which is managed by the Mojave Desert Air Quality Management District (MDAQMD) and classified as *nonattainment* for Federal and state O₃ and PM₁₀ standards (California Air Resources Board [CARB] 2007; USEPA 2007a).

Because of the low population density within the Air Pollution Control District (APCD), limited monitoring resources are distributed over a relatively large geographic area. One air quality monitoring station, operated by the MDAQMD and CARB, is located in the vicinity of SCLA and El Mirage Airport at 14306 Park Avenue in Victorville. This station monitors all criteria pollutants except for Pb. According to the USEPA *Monitor Value Report for Criteria Air Pollutants* (2007), O₃ concentrations were measured at levels above the primary 1-hour NAAQS one time and primary 8-hour NAAQS ten times in 2006 and 2007. In addition,

concentrations were measured above the PM₁₀ 24-hour NAAQS a total of four times in 2006 and 2007. All other criteria pollutants remained below the primary NAAQS in 2006 and 2007 (USEPA 2007b).

3.1.2.3 Emissions at SCLA and El Mirage Airport

Emissions at SCLA and El Mirage Airport are representative of local air quality as described in Section 3.1.2.2, Local Air Quality, and Figure 3-1. While recent air emissions inventories are not available for either airport, primary on-site emission sources at both SCLA and El Mirage include:

- Aircraft operations and maintenance;
- Vehicle operations and maintenance;
- Combustion sources (natural-gas-fired heating units, diesel generators, portable gasoline generators, etc.);
- Fuel-storage operations (underground and above ground fuel-storage tanks, and aircraft refueler tank trucks); and
- Operational sources (paints, paint thinners, solvents, cleaners, and other miscellaneous materials).

3.2 NOISE

Noise is defined as unwanted sound or, more specifically, as any sound that is undesirable because it interferes with communication, is intense enough to damage hearing, or is otherwise annoying (Federal Interagency Committee on Noise [FICON] 1992). Human response to noise can vary according to the type and characteristics of the noise source, the distance between the noise source and the receptor, the sensitivity of the receptor, and the time of day.

Due to the wide range in sound levels, sound is expressed in decibels (dB), a unit of measure based on a logarithmic scale; in other words, a 10-dB increase in noise level corresponds to a 100-percent increase (doubling) in perceived loudness. As a general rule, a 3-dB change is necessary for noise increases to be noticeable to humans (Bies and Hansen 1988). Sound measurement is further refined by using an A-weighted decibel scale that emphasizes the range of sound frequencies that is most audible to the human ear (i.e., between 1,000 and 8,000 cycles per second). Unless otherwise noted, all dB measurements presented in the following noise analysis are A-weighted (dBA).

Day-Night Average Sound Level (DNL) is a noise metric that averages A-weighted sound levels over a 24-hour period, with an additional 10-dB penalty added to noise events occurring between 10:00 PM and 7:00 AM. This penalty is intended to compensate for generally lower background noise levels at night and the additional annoyance of nighttime noise events. DNL is the preferred noise metric of the U.S. Department of Housing and Urban Development (HUD), the U.S. Department of Transportation (USDOT), Federal Aviation Administration (FAA), USEPA, Veterans' Administration, and Department of Defense (DoD). Community Noise Equivalent Level (CNEL) is a noise metric that averages A-weighted sound levels over a 24-hour period, with a 5-dB penalty added to noise events occurring between 7:00 PM and 10:00 PM and a 10-dB penalty added to noise events occurring between 10:00 PM and 7:00 AM. DNL and CNEL are often used interchangeably; however, for a given set of noise measurements CNEL would typically yield a value of 1 dB greater than DNL. Also accepted by Federal agencies, CNEL is widely used within the State of California.

Table 3-1 identifies noise levels associated with some common indoor and outdoor activities and settings. Table 3-1 also indicates the subjective human

Table 3-1. Sound Levels of Typical Noise Sources and Noise Environments

dB(A)	Overall level	Community Noise Levels (Outdoor)	Home and Industry Noise Levels (Indoor)	Subjective Loudness (Relative to 70 dB)
120	Uncomfortably loud	Military jet aircraft take-off from aircraft carrier with afterburner at 50 ft 130 dB	Oxygen torch 121 dB	32 times as loud
110		Turbo-fan aircraft at takeoff power at 200 ft 118 dB	Riveting machine 110 dB Rock band 108-114 dB	16 times as loud
100	Very loud	Boeing 707 or DC-8 aircraft at one nautical mile (6080 ft) before landing 106 dB Jet flyover at 1000 ft 103 dB Bell J-2A helicopter at 100 ft 100 dB		8 times as loud
90		Boeing 737 or DC-9 aircraft at one nautical mile (6080 ft) before landing 97 dB Power mower 96 dB Motorcycle at 25 ft 90 dB	Newspaper press 97 dB	4 times as loud
80		Car wash at 20 ft 89 dB Propeller plane flyover at 1000 ft 88 dB Diesel truck 40 mph at 50 ft . 84 dB Diesel train 45 mph at 100 ft 83 dB	Food blender. 88 dB Milling machine 85 dB Garbage disposal 80 dB	2 times as loud
70	Moderately loud	High urban ambient sound . 80 dB Passenger car 65 mph at 25 ft 77 dB Freeway at 50 ft from pavement edge 10 a.m. 76 dB	Living room music 76 dB Radio or TV-audio, vacuum cleaner 70 dB	70 dB(A)
60		Air conditioning unit at 100 ft 60 dB	Cash register at 10 ft 65-70 dB Electric typewriter at 10 ft 64 dB Dishwasher (Rinse) at 10 ft 60 dB Conversation 60 dB	1/2 as loud
50	Quiet	Large transformers at 100 ft . 50 dB		1/4 as loud
40		Bird calls 44 dB Lowest limit of urban ambient sound 40 dB		
dB Scale Interrupted				
10	Just audible			
0	Threshold of Hearing			

Source: M.C. Branch, et al. 1970. Outdoor Noise and the Metropolitan Environment, Los Angeles, California:
Department of City Planning, City of Los Angeles.

judgments of noise levels, specifically the perception of noise levels doubling or being halved. For reference purposes, a baseline noise level of 70 dB is described as moderately loud. As can be seen in the table illustrating the logarithmic dB scale, humans perceive an increase of 10 dB as a doubling of loudness, while an increase of 30 dB corresponds with an eight-fold increase in perceived loudness.

3.2.1 Noise in the Airfield Environment

Aircraft Operations. Analyses of aircraft noise exposure and compatible land use around DoD facilities are normally accomplished using a group of computer-based programs, collectively called NOISEMAP (U.S. Air Force [USAF] 1992). NOISEMAP, through its program BASEOPS, allows entry of runway coordinates, airfield information, flight tracks, flight profiles (e.g., engine thrust settings, altitudes, and speeds) along each flight track for each aircraft, numbers of flight operations, run-up coordinates, run-up profiles, and run-up operations. Since SCLA Airport is a *civilian airport use* facility, the FAA's Integrated Noise Model (INM) 7.0 was used to analyze civilian, military-based, and transient-military aircraft operations. The model's output comprises a regularly spaced "grid" file containing CNEL values. The NMPLOT program uses the grid file to plot contours of equal CNEL. These CNEL contours can then be overlaid onto maps to depict current noise exposure levels in the SCLA airfield environment. The 65 through 85 CNEL contours were generated for the scenarios described herein. In airport noise analyses, noise contours are used to help determine compatibility of aircraft operations and local land use.

In airport noise analyses, noise contours are used to help determine compatibility of aircraft operations with local land use. Noise levels from flight operations typically exceeding ambient background noise occur beneath main approach and departure corridors, near local air traffic patterns around the airfield, and in areas immediately adjacent to parking ramps and aircraft staging areas. As aircraft take off and gain altitude, their contribution to the noise environment diminishes.

Other Airfield Noise. Although noise resulting from aircraft flight operations represents the greatest contribution to the overall noise environment near the airfield, other noise sources (e.g., highway traffic) may also influence total ambient noise levels. Other activities that may generate substantial amounts of

noise at an airport include engine preflight run-ups and aircraft maintenance activities, industrial operations, and construction activities. Although aircraft maintenance actions and industrial operations may generate large amounts of noise, they are typically confined to the airfield and industrial areas. Construction activities, on the other hand, may occur anywhere on the site and result in disturbance to on-site personnel or off-site noise-sensitive receptors (e.g., housing areas and schools).

3.2.2 Existing Conditions

3.2.2.1 Regional Setting

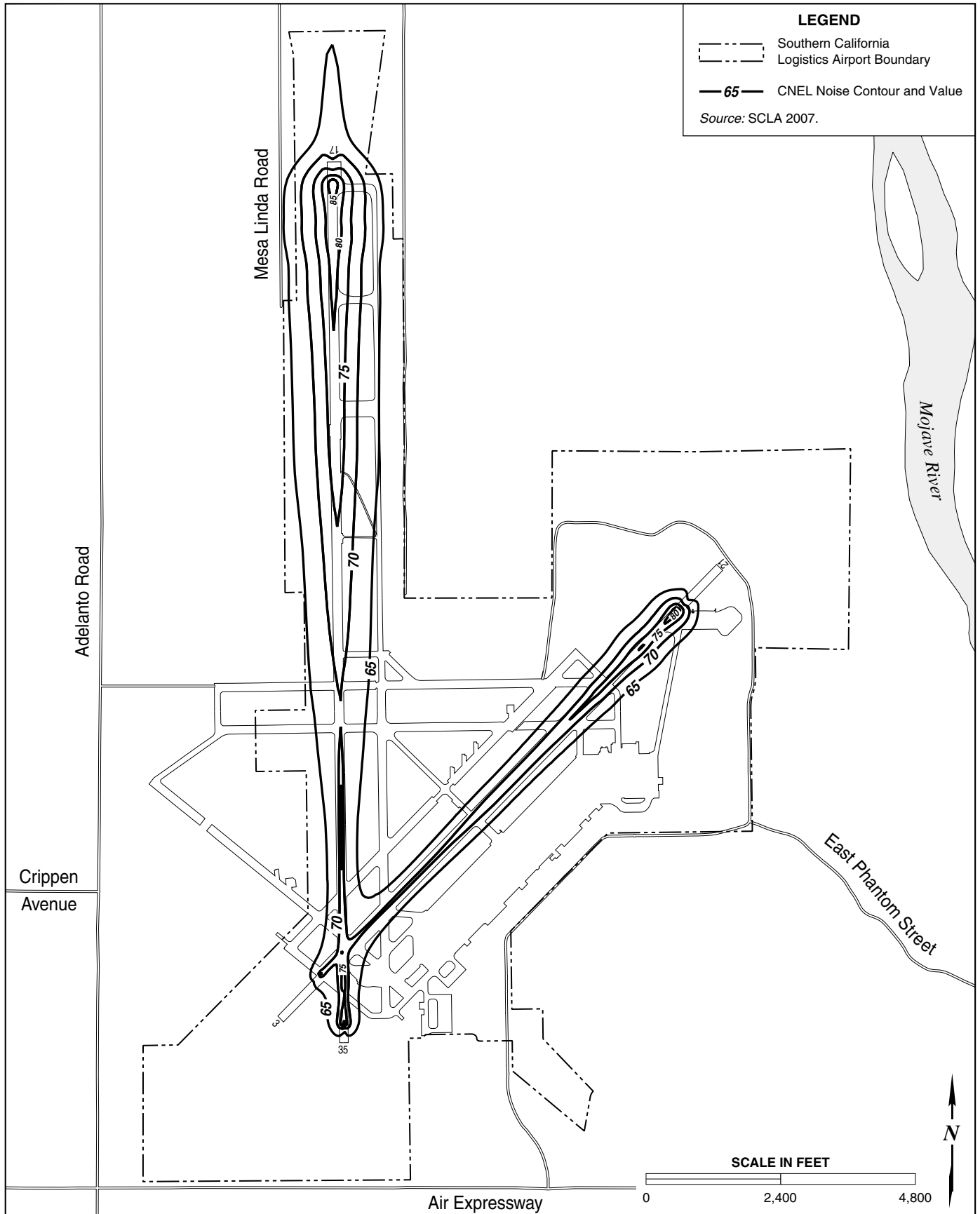
The noise environment of communities surrounding SCLA and El Mirage Airport is characteristic of a rural, low-density environment – settings that typically experience noise associated with vehicles on local highways or light industrial activities. According to FICON, the following communities have the indicated typical ranges of outdoor DNL noise levels: *Rural*, 40 to 48 DNL; *Small Town* and *Quiet Suburban*, 45 to 55 DNL (FICON 1992). Areas adjacent to SCLA support a mix of residential and heavy industrial land use while areas adjacent to El Mirage Airport comprise private unincorporated lands with very few residents. Much of the area surrounding both airports is sparsely populated with noise levels of correspondingly low magnitude; and aircraft activity is the dominant noise producer in the vicinity of both facilities.

3.2.2.2 SCLA

Existing Noise Levels

Noise contours associated with operations at SCLA were developed using INM Version 7.0 (see Figure 3-2). Contours associated with the 70 and 75 CNEL remain entirely within the airport property boundary; however, the 65 CNEL noise contour extends slightly off airport property to the east and west at the northern end of Runway 17/35 by a total of approximately 9.7 acres. This area is zoned for Industrial land use and there are not any sensitive noise receptors in the area.

Runway 17 is the primary runway at SCLA (see Figure 3-2). The tower manager estimates that 75 percent of arrivals and departures occur on this runway. Approximately 20 percent of the operations occur on Runway 21. The remaining



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**Baseline Noise Contours at
Southern California Logistics Airport**

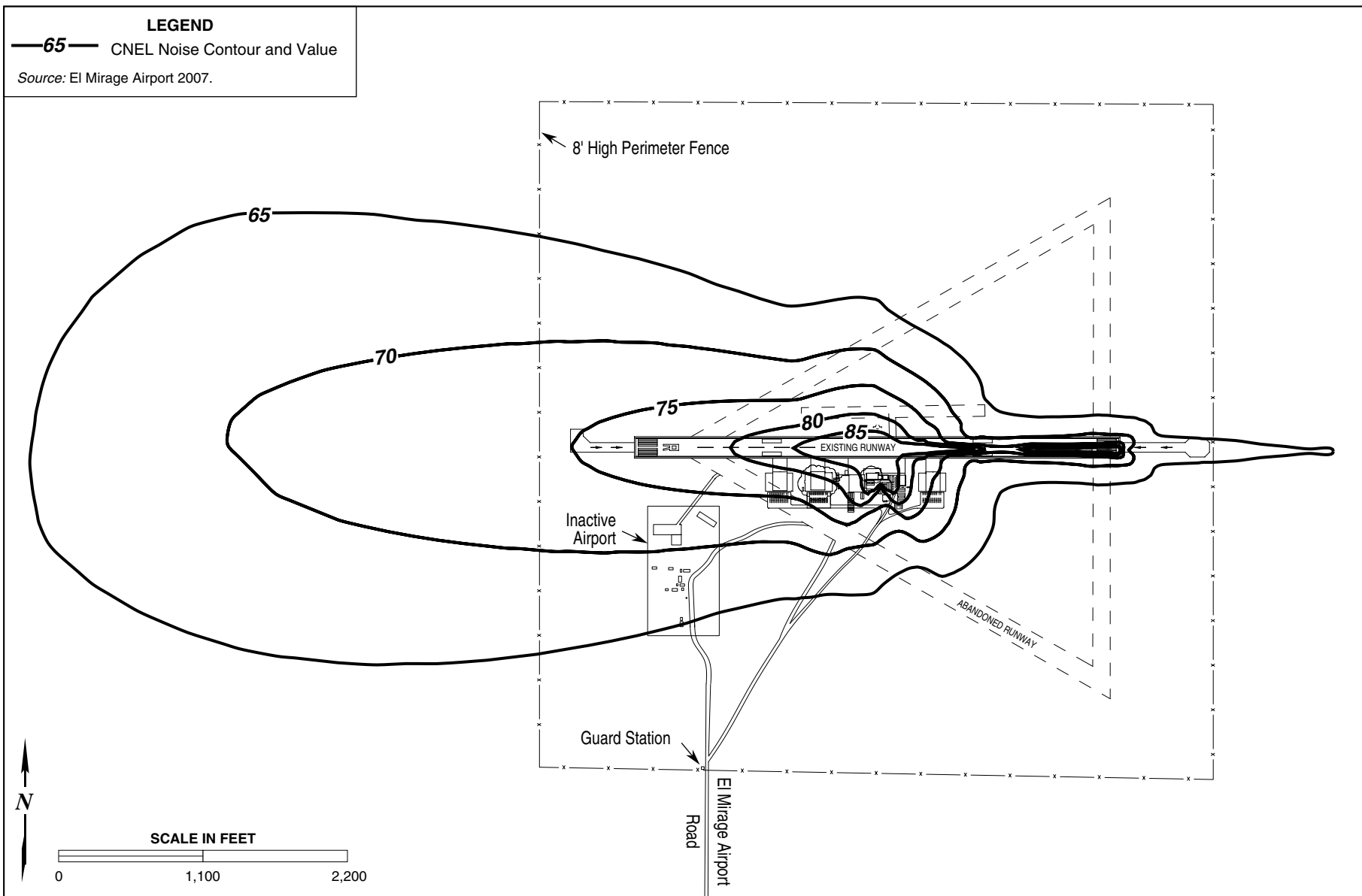
**FIGURE
3-2**

5 percent of operations are split between Runways 3 and 35. Runway 35 is generally used for two weeks every year when a shift in the prevailing winds requires Runway 17 to close (SCLA 2007).

3.2.2.3 El Mirage Airport

Existing Noise Levels

Noise contours associated with operations at El Mirage Airport were developed using INM Version 7.0 (see Figure 3-3). Data on aircraft operations input to INM were based on information provided by Mr. Chuck Sternberg, Deputy Director of Operations at El Mirage Airport, on 30 August 2007. Approximately 295 acres of land lie within the 65 CNEL contour, 130 acres lie within the 70 CNEL contour, and 32 acres lie within the 75 CNEL contour. Operation levels at El Mirage Airport are relatively low; however, noise contours associated with the 65 CNEL do extend beyond the property boundary to the east and west by a total of approximately 203 acres. The 70 CNEL contour extends off airport property to the west by approximately 65.3 areas; however, neither the 65 nor the 70 CNEL contour lies within the vicinity of any sensitive noise receptors. The 75 CNEL contour is contained entirely within airport property.



EA

**Baseline Noise Contours at
El Mirage Airport**

**FIGURE
3-3**

3.3 LAND USE

3.3.1 Definition of Resource

Land use comprises natural conditions or human-modified activities occurring at a particular location. Human-modified land use categories include residential, commercial, industrial, transportation, communications and utilities, agricultural, institutional, recreational, and other developed use areas. Management plans and zoning regulations determine the type and extent of land use allowable in specific areas and are often intended to protect specially designated or environmentally sensitive areas.

3.3.2 Existing Conditions

3.3.2.1 Regional Land Use

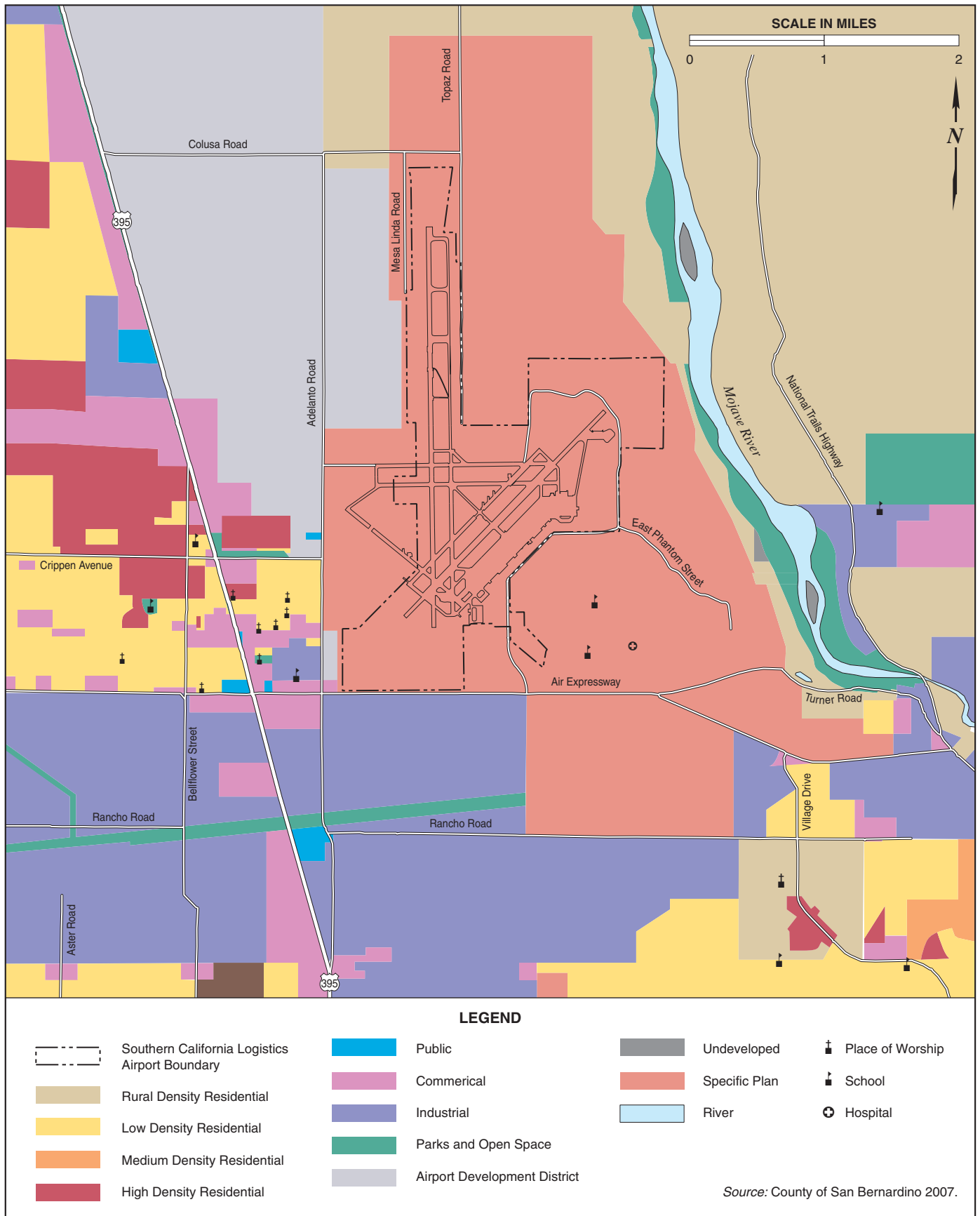
Both SCLA and El Mirage Airport are located in San Bernardino County. Located in California's San Joaquin Valley, San Bernardino County is surrounded by Inyo County to the north, Kern and Los Angeles Counties to the west, Orange and Riverside Counties to the south, and Clark (Nevada), Mojave (Arizona), and La Paz Counties (Arizona) to the east.

Approximately 13 million acres in size, San Bernardino County is the largest county in the contiguous US. About 81 percent, or 10.5 million acres, of the county is non-jurisdictional land. Of the remaining 19 percent, approximately 4 percent lies within the jurisdiction of 24 incorporated cities, while 15 percent is unincorporated and controlled by the county (County of San Bernardino 2007a).

3.3.2.2 Surrounding Land Use

SCLA

Land use surrounding SCLA is controlled by the City of Victorville and the City of Adelanto as well as the county (see Figure 3-4). Land to the southwest of SCLA is zoned for Industrial use. Areas to the south and southeast are zoned predominantly for Low Density Residential, Commercial, and Industrial uses. Land to the east of SCLA is zoned primarily for Rural Density Residential use with additional zoning for Parks and Open Space, Industrial, and Commercial uses. Land to the north and northwest of SCLA is zoned for Rural Density Residential and Airport Development District uses while land to the west of



SCLA is a mix of Airport Development District, Industrial, Low Density Residential, Commercial, and High Density Residential uses (SCLA 2007).

El Mirage Airport

Land use surrounding El Mirage Airport falls under the jurisdiction of San Bernardino County. El Mirage Airport is surrounded by private unincorporated land identified as a Resource Conservation land use zoning district (County of San Bernardino 2007a). Development in the area is sparse, with a few scattered single-family residential areas and very limited commercial activity.

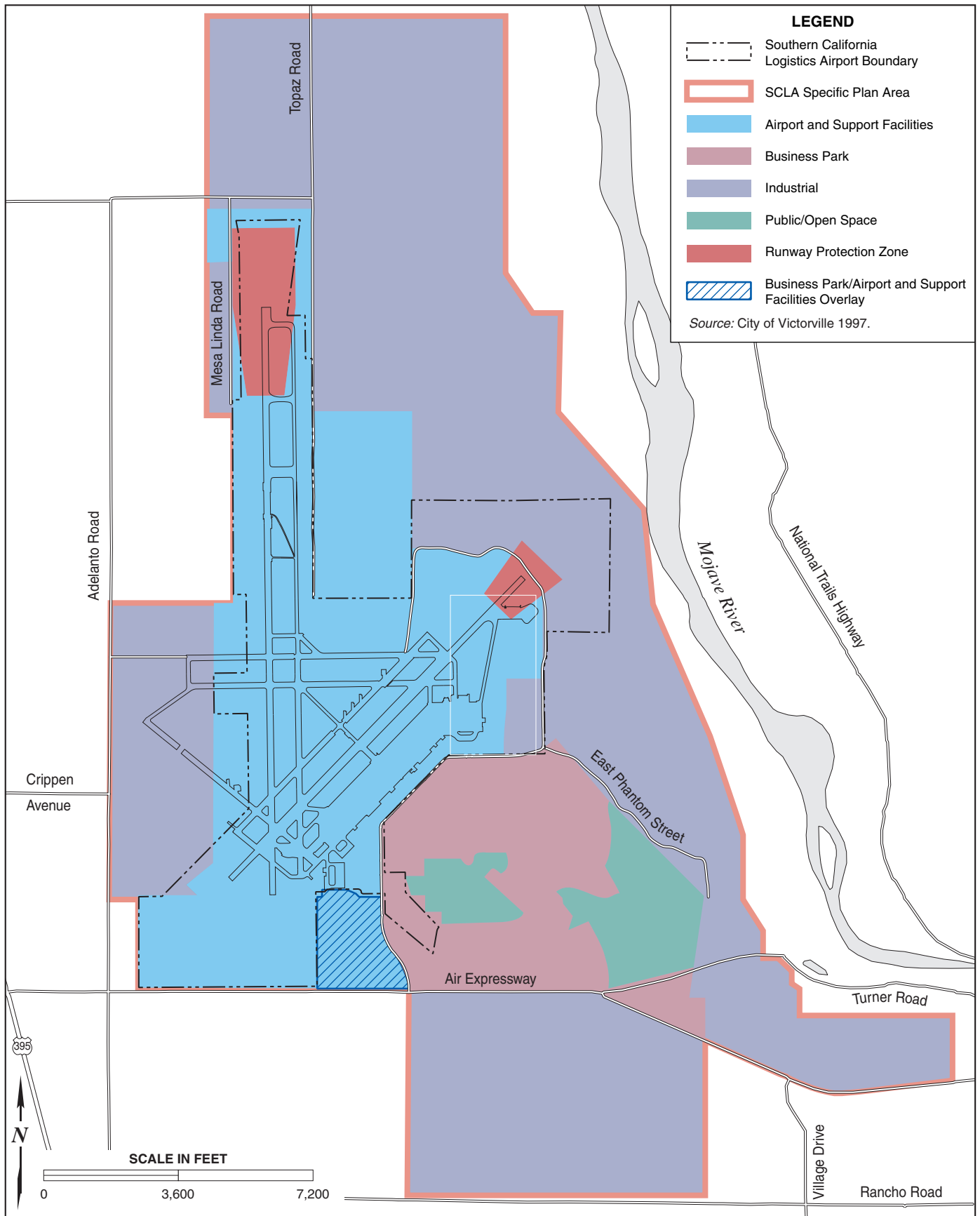
3.3.2.3 On Site Land Use

SCLA

The City of Victorville's General Plan includes a Specific Plan for development near and on SCLA grounds. Figure 3-5 shows the location of land use designations at SCLA. Of the approximately 8,700 acres occupied by SCLA, the Specific Plan designates approximately 2,120 acres for Airport and Support Facilities, 1,160 acres as Business Park, 4,773 acres as Industrial, 300 acres of Runway Protection Zones, and 350 acres of Public/Open Space (City of Victorville 1997).

El Mirage Airport

Of the 640 acres at El Mirage Airport, the majority of land, 26.5 million square feet (SF), is designated as Natural Space. Of the remaining uses, 1.3 million SF are designated as Paved Runways, 20,125 SF are occupied by buildings, 6,640 SF are identified as Cleared Dirt, and 1,835 SF are occupied by non-airfield pavement (General Atomics Aeronautics Systems [General Atomics] 2006).



EA

**Land Use within the
Southern California Logistics Airport Specific Plan Area**

**FIGURE
3-5**

3.4 GEOLOGICAL RESOURCES

3.4.1 Definition of Resource

Geological resources of an area typically consist of surface and subsurface materials and their inherent properties. Principal geologic factors influencing the ability to support structural development are seismic properties (i.e., potential for subsurface shifting, faulting, or crustal disturbance), soil stability, and topography.

The term soil, in general, refers to unconsolidated materials overlying bedrock or other parent material. Soils play a critical role in both the natural and human environment. Soil structure, elasticity, strength, shrink-swell potential, and erodibility all determine the ability for the ground to support man-made structures and facilities. Soils typically are described in terms of their complex type, slope, physical characteristics, and relative compatibility or constraining properties with regard to particular construction activities and types of land use.

Topography is the change in vertical relief (i.e., elevation) over the surface of a predefined land area. An area's topography is influenced by many factors, including human activity, underlying geologic material, seismic activity, climatic conditions, and erosion. A discussion of topography typically encompasses a description of surface elevations, slope, and distinct physiographic features (i.e., mountains, ravines, or depressions) and their influence on human activities.

3.4.2 Existing Conditions

3.4.2.1 Regional Setting

Geology

San Bernardino County is located in the Mojave Desert Region of the Basin and Range Physiographic Province. The region is bound to the north and northwest by the Garlock Fault and Tehachapi Mountains and to the south by the San Gabriel and San Bernardino Mountains. Several faults are present in the region. Characteristic landforms of the region include alluvial fans, stream terraces, and playas. Geologic units exposed in the region are generally grouped into consolidated rocks and unconsolidated deposits. Consolidated rocks of Tertiary age consist of coarse, conglomeratic sandstones that have poor permeability and water-bearing characteristics. Unconsolidated deposits, which comprise most of

the desert floor, are of the Quaternary age. These deposits are composed of materials ranging in size from coarse sands and gravels to silts and clays. These units are typically permeable, porous, and have good water-bearing characteristics (USAF 1992).

Soils

About 64 percent of soils mapped in San Bernardino County belong to the Soils of the Mojave Desert found on floodplains, alluvial fans, and terraces. These soils range from deep to shallow and are moderately well drained to somewhat excessively drained. The surface layer of this soil group is sand, loamy fine sand, sandy loam, loam, and clay. Approximately 27 percent of soils in the county belong to the Soils of the Mojave Desert found on old terraces that have a desert pavement and on alluvial fans, hills, and mountains. These soils range from very shallow to very deep and are described as well drained. The surface layer of soils in this group is gravelly sand, very gravelly sand, cobbly sandy loam, gravelly sandy loam, sandy loam, and loam. The remaining 9 percent of soils in the county belong to the Soils of San Gabriel and San Bernardino Mountains on mountains, foothills, alluvial fans, and terraces. Soils in this group are described as ranging from moderately deep to very deep and well drained to somewhat excessively drained. Their surface layer is typically composed of sandy loam and loamy fine sand (USDA 1986).

Topography

Regional topography is characterized large by the nearly level alluvial fans and floodplains of the desert basin bound to the south by the San Gabriel and San Bernardino Mountains. General elevations in the Mojave Desert range from 4,000 feet above mean sea level (MSL) in the mountain ranges to around 2,000 feet MSL in some of the dry lake basins (USAF 1992).

3.4.2.2 SCLA

Geology

The SCLA is located on an extension of the Victorville Fan, which originates at the base of the San Gabriel Mountains and extends northward to the Mojave River. Surficial geological units at SCLA consist of alluvial deposits originating from nearby mountains during the past one million years. Stream deposits,

erosion, and other weathering factors have modified the alluvial fans to form the present land surface. SCLA is located on a down-dropped block, known as the Mojave Block, bound by the San Andreas and Garlock faults, both of which typically display horizontal movement. Within the Mojave Block, numerous potentially active faults parallel the San Andreas Fault. The Helendale Fault, approximately 10 miles east of SCLA, has experienced movement in the last 11,000 years and is among many active faults found in the region. While there is no known liquefaction potential at SCLA, the airport is located in Seismic Zone 4, which is characterized by areas likely to sustain major damage from earthquakes (USAF 1992).

Soils

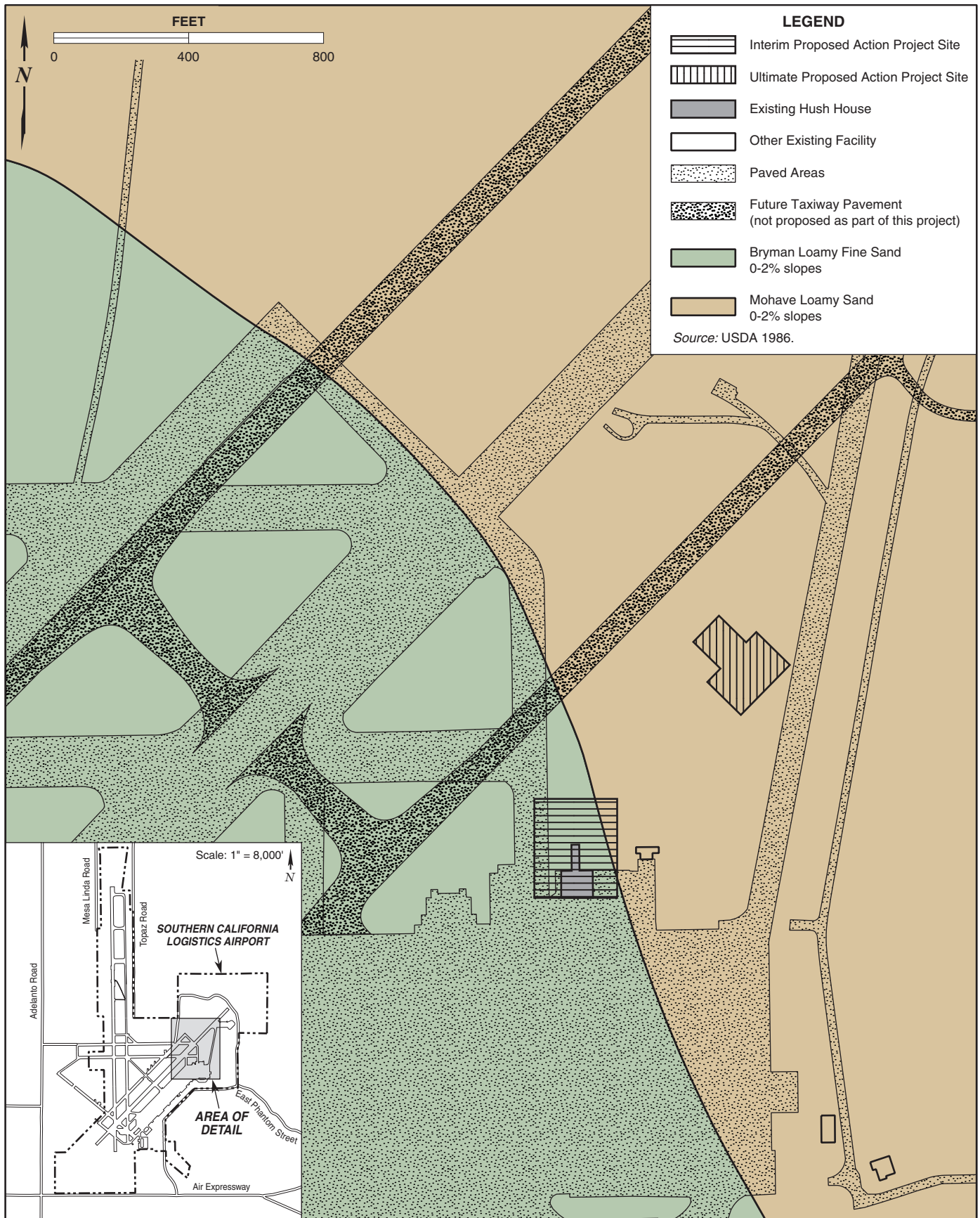
Two predominant soil types are found at the project site at SCLA: Bryman loamy fine sand and Mohave Variant loamy sand. Figure 3-6 shows the location of soil types present at SCLA.

The Bryman loamy fine sand is a very deep, well drained soil derived predominantly from granitic material. Most areas of this soil type are dissected by shallow intermittent drainageways. Permeability of this soil is moderately slow and the available water capacity is moderate to high. This fine sand is highly susceptible to wind erosion in unprotected areas, although the hazard of water erosion represents only a slight limitation with regard to supporting establishment of structures. Its shrink-swell potential is moderate and the overall strength is low. Typically, the surface layer consists of pale brown and light yellow loam with fine sand.

The Mohave Variant loamy sand is a very deep, well drained soil also derived predominantly from granitic sources. Many areas of this soil type are dissected by shallow intermittent drainageways. Typically, the surface layer of this soil is light brown loamy sand about 7 inches thick. Permeability is moderately slow and available water capacity is high. Runoff is medium and the hazard of water erosion is slight while the hazard of wind erosion is high (USDA 1986).

Topography

The topography of SCLA is level with slopes generally ranging between 0 and 2 percent and the facility is located at an elevation of approximately 2,900 feet MSL (USAF 1992; USDA 1986).



EA

**Surface Soils in the Vicinity of the Proposed Action Project Site
Southern California Logistics Airport**

**FIGURE
3-6**

3.4.2.3 El Mirage Airport

Geology

El Mirage Airport is also located on an extension of the Victorville Fan, which originates at the base of the San Gabriel Mountains and extends northward to the Mojave River. Surficial units of the Victorville Fan consist of alluvial deposits originating from nearby mountains during the past one million years. Stream deposits, erosion, and other weathering factors have modified the alluvial fans to form their present land surface. The facility is also located on the down-dropped Mojave Block, bound by the San Andreas and Garlock faults, both of which have primarily horizontal movement. Within the Mojave Block, numerous potentially active faults parallel the San Andreas Fault. The Helendale Fault, approximately 23 miles east of El Mirage Airport, has experienced movement in the last 11,000 years and is among many active faults found in the region (USAF 1992).

Soils

The predominant soil type found at El Mirage Airport is the Manet loamy sand, loamy substratum. This soil type is a very deep, well-drained soil found on the lower margins of alluvial fans. Some areas of this soil type are dissected by shallow drainageways. Permeability of this soil is moderately rapid to a depth of 46 inches and moderately slow below this depth. Available water capacity is low or moderate. Runoff is slow and the hazard of water erosion is slight; however, this soil is highly susceptible to wind erosion. Its shrink-swell potential is moderate and the overall strength is low. Typically, the surface layer is light brownish gray loamy sand about 6 inches thick (USDA 1986).

Topography

El Mirage Airport is located at an approximate elevation of 2,865 feet MSL, and the site is essentially level with no hilly terrain or unusual drainage to affect building sites, access, or parking areas (General Atomics 2006).

3.5 WATER RESOURCES

3.5.1 Definition of Resource

Water resources analyzed for this environmental assessment include surface and groundwater resources. The quality and availability of surface and groundwater and potential for flooding are addressed in this section. Surface water resources comprise lakes, rivers, and streams and are important for a variety of reasons including economic, ecological, recreational, and human health. Groundwater comprises the subsurface hydrologic resources of the physical environment and is an essential resource in many areas; groundwater is commonly used for potable water consumption, agricultural irrigation, and industrial applications. Groundwater properties are often described in terms of depth to aquifer, aquifer or well capacity, water quality, and surrounding composition.

Water resources are also important because of their significant role in determining historical migratory and settlement patterns of virtually all mammals; influence on nesting and migratory activities of many bird species; contribution to the evolution of landforms through their roles in the erosion process; and their participation in critical global systems including hydrologic cycle, temperature modification, and oxygen replenishment.

Other issues relevant to water resources include watershed areas affected by existing and potential runoff and hazards associated with floodplains. Floodplains are belts of low, level ground present on one or both sides of a stream channel and are subject to either periodic or infrequent inundation by floodwater. Inundation dangers associated with floodplains have prompted Federal, state, and local legislation that limits development in these areas largely to recreation and preservation activities. For example, Executive Order 11988, *Floodplains Management*, and AFI 32-7064, require actions to minimize flood risk and impacts. Under this order, development alternatives must be considered, and building requirements must be in accordance with specific Federal, state, and local floodplain regulations.

Wetlands are defined by the U.S. Army Corps of Engineers (USACE) and USEPA as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in

saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas” (33 CFR 328.3 [b]; 1984). Wetlands provide a variety of functions including groundwater recharge and discharge; flood flow alteration; sediment stabilization; sediment and toxicant retention; nutrient removal and transformation; aquatic and terrestrial diversity and abundance; and uniqueness. Three criteria are necessary to define wetlands: vegetation (hydrophytes), soils (hydric), and hydrology (frequency of flooding or soil saturation). *Hydrophytic vegetation* is classified by the estimated probability of occurrence in wetland versus upland (non-wetland) areas throughout its distribution. *Hydric soils* are those that are saturated, flooded, or ponded for sufficient periods during the growing season and that develop anaerobic conditions in their upper horizons (i.e., layers). *Wetland hydrology* is determined by the frequency and duration of inundation and soil saturation; permanent or periodic water inundation or soil saturation is considered a significant force in wetland establishment and proliferation. Jurisdictional wetlands are those subject to regulatory authority under Section 404 of the Clean Water Act (CWA) and Executive Order 11990, *Protection of Wetlands*.

3.5.2 Existing Conditions

3.5.2.1 Regional Setting

Surface Water

The Mojave River drainage basin covers an area of 3,000 square miles in the south-central portion of the Mojave Desert. The river channel is about 125 miles long and has a gradient of approximately 19 feet per mile. The river acts as the principal source of recharge to the Upper Mojave River Groundwater Basin. Watersheds in the mountain ranges in the south of the region contribute to a majority of the river’s stream flow. The Mojave River has only three major tributaries within the desert – the Fremont Wash, Buckthorn Canyon, and Oro Grande – and these tributaries flow only after intense storms. Heavy precipitation is the principal source of surface water and is responsible for the formation of gullies and channels that form the tributaries to the Mojave River. The above ground flow of the Mojave River is intermittent in most places. Along most of its course, water flows above ground only after storms. Perennial flows occur near Victorville, Camp Cady, and Afton Canyon, where hard rock barriers force groundwater up to the surface. The amount of water in the Mojave River

varies greatly from year to year; for example, flows measured at the same monitoring station have ranged from more than 300,000 acre-feet one year to less than 10,000 acre-feet another (Bureau of Land Management [BLM] 2005; USAF 1992).

The Lahontan Regional Water Quality Control Board (RWQCB) manages water resources in the region and has developed a Basin Plan for the Mojave River Basin that establishes water quality objectives and defines beneficial uses for segments of the Mojave River (SCLA 2006).

Groundwater

The water-bearing alluvial deposits of the Mojave River are a major source of groundwater in the region. Hard rock formations along the river divide the coarse river deposits into numerous subsurface basins. Water from the river recharges these basins. Other basins in the area from which considerable groundwater is withdrawn are in the vicinity of Lucerne Valley, El Mirage, and Harper Lake.

Floodplains

The floodplain of the Mojave River is 0.5 to 1 mile wide along most of the river (BLM 2005).

3.5.2.2 SCLA

Surface Water

No perennial or intermittent streams occur on SCLA. On-base runoff normally collects in slight topographic lows or along streets during intense storms due to the limited capacity of storm drains and collection systems. Surface flow occurs only during storm events and travels via sheet flow to the Mojave River to the east or to the Fremont Wash to the west and then north to the Mojave River.

Surface water runoff along the eastern section of the airport is transported through street gutters and pipelines to an outfall ditch that eventually flows to the Mojave River. Most of the runway and taxiway surface flow is collected by inlets and conveyed in piping to an outfall ditch (unimproved channel) that runs parallel to the eastern airport boundary. Runoff from the flightline, industrial, and office areas is directed in a northern and eastern direction. All water from

airport storm drainage ultimately flows toward the Mojave River. Runoff from the western portion of the airport is directed northwest and toward Fremont Wash and eventually toward the Mojave River. Because of high evaporation and percolation rates associated with the surrounding soils and the climate, runoff from normal rainfall seldom directly reaches the Mojave River. However, during abnormally intense rainfall, localized flooding may occur and some runoff may reach the river. The USEPA's Region 9 has ultimate jurisdiction for Federal water quality standards and requirements in the project area. The project area is also under the jurisdiction of the State Water Resources Control Board implemented by Region 6 Lahontan RWQCB. These agencies enforce state water quality standards and requirements, as well as coordinating Federal reviews, permitting procedures and enforcement actions (SCLA 2006).

Groundwater

SCLA overlies the George subbasin of the Mojave River Groundwater Basin. Groundwater under SCLA appears to be concentrated in two main zones. The shallowest zone of groundwater occurs under perched or unconfined conditions and is discontinuous across most of SCLA. Groundwater is located between 200 and 600 feet in depth beneath SCLA (USAF 1992; SCLA 2006).

Floodplains

SCLA is located outside of the 500-year floodplain (Federal Emergency Management Agency 1996). The 100-year floodplain located nearest to SCLA is associated with the Mojave River, which is approximately 1 mile east of the airport. There are two stormwater channels on airport property, neither of which are located within the 100-year floodplain (BLM 2005; SCLA 2006).

3.5.2.3 El Mirage Airport

Site-specific information about water resources at and in the immediate vicinity of El Mirage Airport has not yet been provided. In the event that El Mirage Airport was selected as the location for the LRE site and training facilities, a site-specific water resources study would need to be conducted to adequately describe existing environmental conditions at the airport and in its vicinity.

3.6 BIOLOGICAL RESOURCES

3.6.1 Definition of Resource

Biological resources include native or naturalized plants and animals and the habitats in which they occur. Sensitive biological resources are defined as those plant and animal species listed as threatened or endangered, or proposed as such, by the U.S. Fish and Wildlife Service (USFWS) or California Department of Fish and Game (CDFG), and designated or known critical habitat for these species.

Plants and animal species listed as threatened or endangered by the USFWS are formally protected under the Federal Endangered Species Act (ESA) of 1973. This law prohibits any action, administrative or real, that results in a “taking” of a listed species, or adversely affects habitat. Plants and animals listed as threatened or endangered by the CDFG are formally protected under state law. Federal species of concern are not protected by law; however, these species could become listed, and therefore protected, at any time.

3.6.2 Existing Conditions

3.6.2.1 Regional Setting

San Bernardino County lies within the western Mojave Desert bound to the northwest by the Tehachapi Mountains and to the south by the San Gabriel and San Bernardino Mountains. The predominant aspect of the western Mojave is a flat, sparsely vegetated region interspersed with mountain ranges and dry lakes. The area is part of the high desert, large portions of which lie at elevations between 2,600 and 4,000 feet. Freezing temperatures are limited to a few days in the winter in most of the region, while summer temperatures regularly exceed 100 °F. The characteristic creosote bush and saltbush communities are covered with wildflowers in years of above-normal winter rainfall, and up to 90 percent of the flora is composed of annual plants (BLM 2005).

A majority of the county is located within the boundaries of the proposed West Mojave Plan, a Habitat Conservation Plan (HCP). The Draft Environmental Impact Report and Environmental Impact Statement (EIR/EIS) addressing this HCP was released for public comment on 10 June 2003 and the final EIR/EIS was released on 25 March 2005. The HCP will not take effect until all local jurisdictions pass ordinances adopting the Plan and jurisdictional approvals are completed. The final EIR/EIS has encountered resistance, and available information leaves doubt as to whether regulatory agencies will issue "take" permits for the plan. The CDFG has indicated that the conservation measures proposed by the Plan are likely insufficient for the HCP to fulfill the "fully mitigated" requirement of the California Endangered Species Act. The USFWS has not issued a Biological Opinion on the plan. Regardless, SCLA is not proposed for habitat conservation in the plan (SCLA 2007). Special status species (i.e., Federal- and state-listed threatened and endangered species) occurring in the western Mojave Desert are listed in Table 3-2.

3.6.2.2 SCLA

Vegetation

A natural resources survey was conducted at SCLA in November of 2005 and January 2006, and the survey report is available upon request from SCLA. No sensitive biological species were observed. With regard to vegetation, existing conditions range from moderately to heavily disturbed habitat. Vegetation across most of the area comprises moderately disturbed Mojavean creosote bush scrub habitat in which principal disturbance is associated with the historic use of the area as an air force base and current use as an airport. The creosote bush scrub on the site is characterized by creosote bush (*Larrea tridentata*), burrobrush (*Ambrosia dumosa*) and rabbit brush (*Hymenoclea salsola*). The only protected plant species found during the surveys were Joshua trees (*Yucca brevifolia*), impacts to which are regulated by both the City of Victorville and San Bernardino County.

Table 3-2. Special Status Species in the Western Mojave Desert

Common Name	Scientific Name	Federal Status	State Status
PLANTS			
Cushenbury milkvetch	<i>Astragalus albens</i>	E	None
Cushenbury buckwheat	<i>Erigeron ovalifolium</i> var. <i>vineum</i>	E	None
Cushenbury oxytheca	<i>Oxytheca parishii</i> var. <i>goodmaniana</i>	E	None
Lane Mountain milkvetch	<i>Astragalus jaegerianus</i>	E	None
Parish's daisy	<i>Erigeron parishii</i>	T	None
ANIMALS			
Fish			
Mojave tui chub	<i>Gila bicolor mohavensis</i>	E	E
Amphibians			
Arroyo toad	<i>Bufo californicus</i>	E	None
California red-legged frog	<i>Rana aurora draytonii</i>	T	None
Reptiles			
Desert tortoise	<i>Gopherus agassizii</i>	T	T
Birds			
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Delisted	E
Burrowing Owl	<i>Athene cunicularia</i>	SSC	SSC
Inyo California Towhee	<i>Pipilo crissalis eremophilus</i>	T	E
Least Bell's Vireo	<i>Vireo bellii pusillus</i>	E	E
Southwestern Willow Flycatcher	<i>Empidonax traillii extimus</i>	E	E
Mammals			
Mohave ground squirrel	<i>Spermophilus mohavensis</i>	SSC	T

E = Endangered

SSC = Species of Special Concern

T = Threatened

Sources: BLM 2005; CDFG 2007; SCLA 2006.

Wildlife

Wildlife signs observed on the site included scat, tracks, burrows, nests, calls, and individual animals. Common mammals included the California jack-rabbit (*Lepus californicus*) and antelope ground squirrel (*Ammospermophilus leucurus*). Common bird species observed were Meadow Lark (*Sturnella neglecta*), Raven (*Corvus corax*), and Mourning Dove (*Zenaida macroura*). Sideblotched lizard (*Uta stansburiana*) was the most common reptile observed on the site.

Threatened and Endangered Species

Desert Tortoise

The desert tortoise (*G. agassizii*) is listed under both state and Federal law as a threatened species. The desert tortoise is typically found in creosote bush scrub. They are most often found on level ground where the substrate is firm but not too rocky. SCLA is not located within the designated critical habitat for this species. In 1992 the BLM issued the California Statewide Desert Tortoise Management Policy which included categorizing habitat into three levels of classification. The management goal for Category I areas is to maintain stable, viable populations and to increase the population where possible. The management goal for Category II areas is to maintain stable, viable populations. The management goal for Category III areas is to limit population declines to the extent feasible. SCLA occurs in desert tortoise habitat designated as Class II. Based on the desert tortoise's range and the types of habitat present at SCLA, their presence there can not be entirely ruled out.

Burrowing Owl

The Burrowing Owl (*A. cunicularia*) is a state and Federal Species of Special Concern, primarily because it is a migratory bird, typically found in grassland, scrubland and desert habitats within small mammal burrows (Coulombe 1971). Burrowing Owls nest and roost in modified, expanded burrows originally created by fossorial animals including ground squirrels, desert tortoise, and badgers. They are also known to make use of human-created structures such as cement culverts and pipes for burrows. Burrowing Owls have crepuscular (dawn and dusk) hunting habits but are often observed perched in or near the burrow entrance during the day. They prey upon invertebrates and small vertebrates and their nesting season occurs between 1 February and 31 August. Californian Burrowing Owls migrate either downslope or southerly, but often remain in the breeding area during the non-nesting period. While Burrowing Owls have not been observed at SCLA their presence there cannot be ruled out due to their range and the type of habitat available at SCLA.

Mohave Ground Squirrel

The Mohave ground squirrel (*S. mohavensis* [MGS]) is endemic to 2 million hectares in the western Mojave Desert typically in sandy soils of alkali sink and

creosote bush scrub. MGS are listed as threatened by the State and as a species of concern by the USFWS due to habitat loss, fragmentation and deterioration. Estivation, or a period of dormancy similar to hibernation, begins usually in the early summer when vegetation begins to dry up and MSG reanimate after winter rains have produced new vegetative growth, generally in February. Males may travel up to 1 mile per day in search of mates upon emergence in the spring. By the end of March, litters of six to nine young are born. By early May, young are weaned and disperse within a few weeks, often establishing home ranges adjacent to the maternal home range; however, some young will disperse up to 4 miles. When winter rains fail, MGS do not reproduce and can enter dormancy as early as April. As a result, populations decline after a low rainfall year and two successive years of drought can lead to the extinction of local populations. No focused trapping study for MGS has been conducted on the site. However, SCLA is located within the historical range of MGS and vegetated portions of SCLA contain primary constituent elements of MGS habitat (SCLA 2006).

3.6.2.3 El Mirage Airport

In general, biological resources at El Mirage Airport are similar to those described for SCLA. Most of the area is moderately disturbed Mojavean creosote bush scrub habitat in which principal disturbance is associated with the historic use of the area as an air force facility or current use as an airport. The creosote bush scrub on the site is characterized by creosote bush (*L. tridentata*), burrobrush (*A. dumosa*) and rabbit brush (*H. salsola*). No protected or endangered trees exist on site (General Atomics 2006).

Site-specific information about biological resources at and in the immediate vicinity of El Mirage Airport has not yet been provided. In the event that El Mirage Airport was selected as the location for the LRE site and training facilities, a site-specific biological resource study would need to be conducted to adequately describe existing environmental conditions at the airport and in its vicinity.

3.7 TRANSPORTATION AND CIRCULATION

3.7.1 Definition of Resource

Transportation and circulation refer to the movement of vehicles throughout a road and highway network. Primary roads are principal arterials, such as major interstates, designed to move traffic and not necessarily to provide access to all adjacent areas. Secondary roads are arterials such as rural routes and major surface streets which provide access to residential and commercial areas, hospitals, and schools.

3.7.2 Existing Conditions

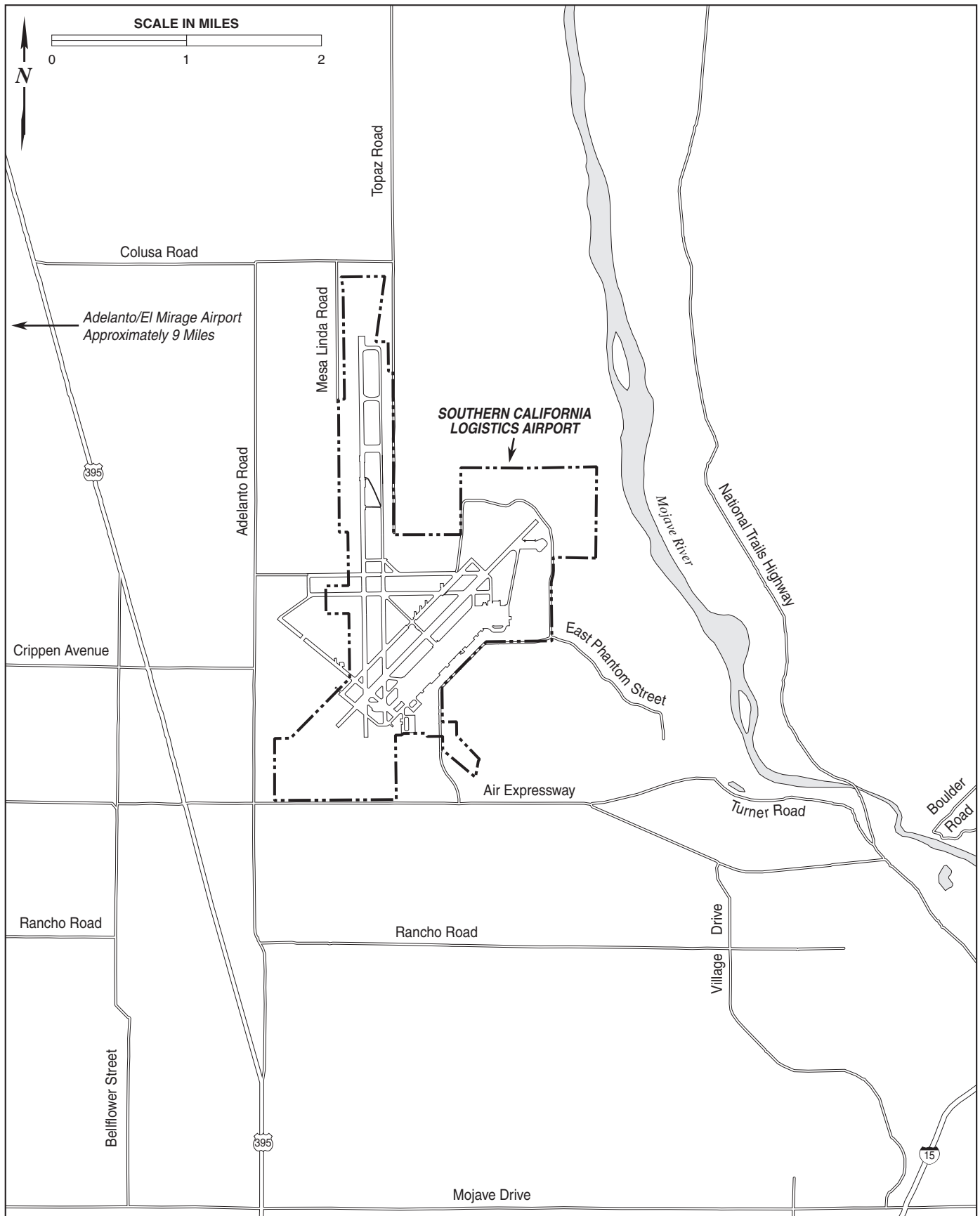
3.7.2.1 Regional Transportation

A network of interstate highways, U.S. and state highways, and city and county roads serves the region (see Figure 3-7). From Victorville, Interstate 15 (I-15) provides direct access to Ontario, 45 miles to the south, and to Barstow, 35 miles to the northeast. I-215 connects from I-15 to San Bernardino, about 45 miles to the south. From Ontario, I-10 links the region with Los Angeles, about 50 miles west of Ontario, and Palm Springs, about 60 miles to the east. U.S. Highway 395 (U.S. 395) intersects I-15 about 13 miles south of Adelanto but diverges toward the north, whereas I-15 continues to run in a northeasterly direction. State Route (SR) 18 (Palmdale Road) is the major east-west highway through Victor Valley, and connects to both U.S. 395 and I-15.

3.7.2.2 Local Transportation and Circulation

SCLA

Air Expressway provides primary access to SCLA and connects to U.S. 395 to the west and I-15 to the east via Village Drive and National Trails Highway (see Figure 3-8). Although none have been established for the immediate vicinity of SCLA, 24-hour daily traffic counts have been established for various local roads that would be used to access the SCLA from I-15 and U.S. 395. Vehicle movement on local roadways in the vicinity of SCLA currently flows continuously without gridlock. Traffic counts were also taken on U.S. 395 at Mojave Drive and vehicle movement also flows continuously on these roadways.



EA

**Transportation Network in the Vicinity of
Southern California Logistics Airport**

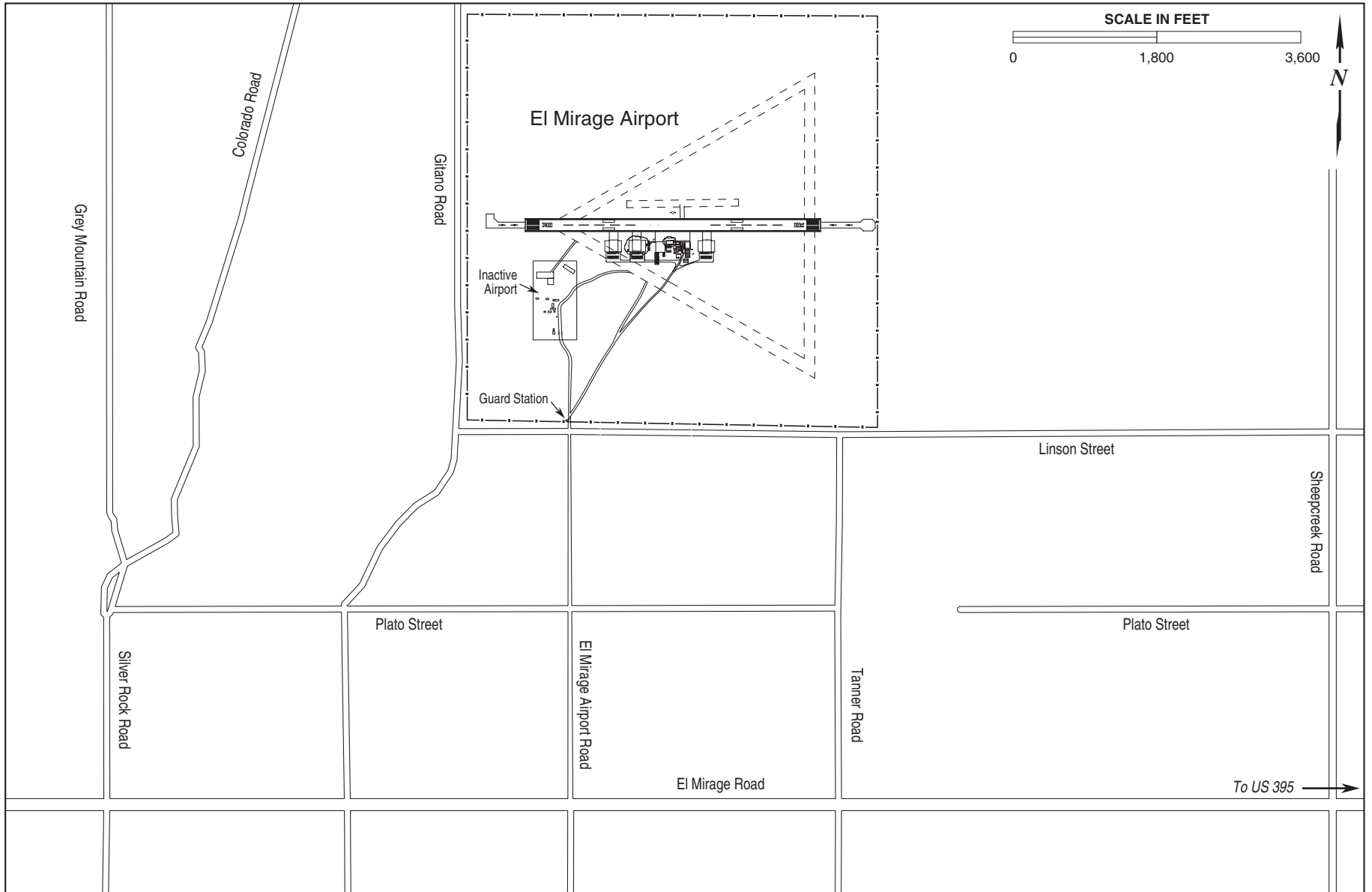
**FIGURE
3-8**

The County of San Bernardino's Congestion Management Plan (CMP) level of service (LOS) standard requires that roadway segments operate at LOS E or higher. No roadway segments in the vicinity of SCLA have been designated below LOS E (County of San Bernardino 2007a). As a former military base, parking at SCLA does not follow state code requirements. Parking facilities accommodate current demand at SCLA and parking for up to 10 vehicles could be easily accommodated at the Proposed Action site (SCLA 2007).

El Mirage Airport

Local access to El Mirage Airport is provided by El Mirage Airport Road which connects to U.S. 395 approximately 7 miles to the east, via El Mirage Road, Koala Road, and Chamberlaine Way (see Figure 3-9). Traffic volumes on El Mirage Airport Road and El Mirage Road are typical of rural settings and are relatively low. A recent count performed by the County in March 2007 indicates an Average Daily Traffic (ADT) count of 496 on El Mirage Airport Road just north of El Mirage Road. Observations conducted in July 2006 on El Mirage Road east of Sheep Creek Road indicated an ADT count of 3,511 (County of San Bernardino 2007b).

No roadway segments in the vicinity of El Mirage have been designated below LOS E (County of San Bernardino 2007a). Parking spaces at El Mirage Airport are not formally defined; the airport utilizes unpaved open areas adjacent to offices and buildings which are more than adequate for existing parking demand.



EA

Transportation Network in the Vicinity of
El Mirage Airport

FIGURE
3-9

3.8 VISUAL RESOURCES

3.8.1 Definition of Resource

Visual resources are defined as the natural and manufactured features that comprise the aesthetic qualities of an area. These features form the overall impressions that an observer receives of an area or its landscape character. Landforms, water surfaces, vegetation, and manufactured features are considered characteristic of an area if they are inherent to the structure and function of a landscape.

The significance of a change in visual character is influenced by social considerations including public value placed on the resource, public awareness of the area, and general community concern for visual resources in the area. These social considerations are addressed as visual sensitivity and are defined as the degree of public interest in a visual resource and concern over potential adverse changes in the quality of that resource.

3.8.2 Regional Visual Character

SCLA and El Mirage Airport are located in the vicinity of the cities of Victorville and Adelanto, respectively. Both cities are primarily comprised of sprawling suburban and commercial development surrounded by open desert. The San Bernardino and San Gabriel Mountains are the dominant regional visual features, often displaying snowcapped peaks during winter and spring.

The region surrounding SCLA is characterized by level terrain comprising open desert space to the northwest, north, and northeast; commercial and residential land use to the west; industrial and low-density residential land use to the south; and a mix of commercial, industrial, and open space land use to the west. The region surrounding El Mirage Airport is characterized by level, open desert in all directions with an area of rural residential use to the east of the facility.

3.8.2.1 SCLA

SCLA was previously active as George Air Force Base (AFB) and much of the original infrastructure and facilities development remains intact at the airport; as such, the visual environment at SCLA is typical of an airfield environment with a control tower, paved runways and taxiways, aircraft hangars, maintenance and support facilities, and office facilities. Still, significant amounts of acreage within

SCLA are occupied by open desert space. SCLA is a relatively low sensitivity visual environment, primarily because only a few areas of SCLA can be viewed from off-property. Limited public views of the west side of the airport are available to people traveling on Adelanto Road and U.S. 395, and views of southern portion of SCLA are available from Air Expressway.

3.8.2.2 El Mirage Airport

The visual environment at El Mirage Airport is typical of a small airfield environment with a paved runway, a few aircraft hangars, maintenance and support facilities, and modular office units. Over 95 percent of the facility is occupied by open desert space. Public views of components of El Mirage, mainly aircraft hangars, can be seen from El Mirage Airport Road and El Mirage Road. Due in part to the remote nature of the facilities, El Mirage Airport and the surrounding area has generally low visual sensitivity.

3.9 CULTURAL RESOURCES

3.9.1 Definition of Resource

Cultural resources represent and document activities, accomplishments, and traditions of previous civilizations and link current and former inhabitants of an area. Depending on their conditions and historic use, these resources may provide insight to living conditions in previous civilizations and may retain cultural and religious significance to modern groups.

Archaeological resources comprise areas where prehistoric or historic activity measurably altered the environment or deposits of physical remains (e.g., arrowheads, bottles) discovered therein. Architectural resources include standing buildings, districts, bridges, dams, and other structures of historic or aesthetic significance. Architectural resources generally must be more than 50 years old to be considered for inclusion in the National Register of Historic Places (NRHP), an inventory of culturally significant resources identified in the U.S.; however, more recent structures, such as Cold War-era resources, may warrant protection if they have the potential to gain significance in the future. Traditional cultural resources can include archaeological resources, structures, neighborhoods, prominent topographic features, habitats, plants, animals, and minerals that Native Americans or other groups consider essential for the persistence of traditional culture.

The principal Federal law addressing cultural resources is the National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S. Code [USC] Section 470), and its implementing regulations (36 CFR 800). The regulations, commonly referred to as the Section 106 process, describe the procedures for identifying and evaluating historic properties; assessing the effects of Federal actions on historic properties; and consulting to avoid, reduce, or minimize adverse effects. As part of the Section 106 process, agencies are required to consult with the State Historic Preservation Officer (SHPO).

The term “historic properties” refers to cultural resources that meet specific criteria for eligibility for listing on the NRHP; historic properties need not be formally listed on the NRHP. Section 106 does not require the preservation of historic properties, but ensures that the decisions of Federal agencies concerning the treatment of these places result from meaningful considerations of cultural

and historic values and of the options available to protect the properties. The Proposed Action is an undertaking as defined by 36 CFR 800.3 and is subject to requirements outlined in Section 106.

The *Department of Defense, American Indian and Alaska Native Policy* governs the department's interactions with federally recognized tribes. The policy outlines DoD trust obligations, communication procedures with tribes on a government-to-government basis, consultation protocols, and actions to recognize and respect the significance that tribes ascribe to certain natural resources and properties of traditional cultural or religious importance. The policy requires consultation with federally recognized tribes for proposed activities that could significantly affect tribal resources or interests.

3.9.2 Existing Conditions

3.9.2.1 Regional History

SCLA and El Mirage Airport are located in an area known as Victor Valley. Prehistorically, this area was inhabited by a number of Native American tribes. Shoshonean Paiutes are believed to have moved into the area and adapted to it, pushing out the remainder of earlier inhabitants in the process. The Paiutes themselves later were pushed out by the nearby Mojaves and the Apaches. Other tribes in the area included the Serranos who lived in the forested mountains, the Vanyumes who lived along the Mojave River, and the Chemehueves who lived in between them.

Initial Euro-American incursions began with the Spanish missionaries and soldiers who entered California from the south, beginning in 1769. This period is characterized by the establishment of missions and military presidios, agricultural development of large tracts of land controlled by the missions, and subjugation of the local native population for labor. Victor Valley was located along an important trading route, the Santa Fe Trail, which linked the earlier missions of Arizona and Sonora to the San Joaquin Valley.

Like many other parts of California, Victor Valley experienced a boom during the gold rush. In 1860, a resident of San Bernardino struck gold near Big Bear Lake and the boom that followed led to the creation of additional roads in the area. In 1883 the first railroad track reached Victor Valley from San Bernardino by way of the Cajon Pass. Built by the California Southern Railroad, the line reached the

Union Pacific Railroad junction at Bartsow/Dagget by 1885. Thereafter, numerous mining tracks and shortline roads were built throughout the area. The area quietly grew with ranching and mining operations and in the early 1900s thousands of acres were opened up by the Federal government to homesteading (California Historic Route 66 Association 1996).

3.9.2.2 SCLA

Archaeological Resources

In compliance with the NHPA, the USAF conducted the Section 106 consultation process when it was in the process of closing George AFB. Record and literature searches were performed at the Archaeological Information Center (San Bernardino County Museum), the National Archives (Pacific Southwest Region), and in concert with personnel at George AFB.

Numerous cultural resource surveys were conducted on George AFB and in its immediate environs. The most recent survey was performed in November 1990 in support of base closure; at the time, the survey area encompassed approximately 3,500 acres, and covered all areas not subject to development or major disturbance.

Three archaeological sites (one prehistoric, one historic, and one of unknown temporal affiliation) were recorded during the 1990 survey. In addition, 13 isolated finds were located. The archaeological sites consisted of:

- A low-density prehistoric lithic scatter;
- A rock cairn (unknown temporal affiliation); and
- An historic trash dump (circa 1930s).

Historic Structures and Resources

No evidence of pre-military historic sites or structures was identified at SCLA, the former George AFB; however, the base itself was established during World War II, and certain original facilities could reflect the historical development of that era, specifically as they relate to the training of military flight crews.

Because there was a potential for historical significance, World War II buildings were evaluated to determine whether or not they could be considered eligible for

the NRHP. Four historic structures were thought to be potentially significant following the initial evaluation of George AFB facilities. Upon further investigation, however, the Air Force determined that these properties were not eligible for inclusion in the NRHP. The SHPO concurred with this determination in their letter dated 7 August 1991. Section 106 consultation with the SHPO was also initiated by the NGB as a part of this EA. To date, the SHPO has not provided any comments indicating the presence of any cultural resources at the Proposed Action site.

The potential for archaeological resources, historic structures, and buried historic properties were determined to exist in parcels near the former George AFB. Evidence was provided through the records search, which examined historic maps and related materials. The existence and nature of these sites can only be determined following a reconnaissance survey if these properties are purchased in the future (SCLA 2006).

Native American Resources

Native American resources consultation was previously initiated with the Native American Heritage Commission (NAHC) to ascertain whether or not any Native American group or individual has concern with or can identify sacred areas within the former George AFB and its environs. Based on that consultation, it was determined that no area of interest to Native Americans existed within the base or its immediate vicinity. In addition, consultation initiated with the NAHC as part of this EA did not identify any Native American resources at the Proposed Action site (Appendix A). No interest in the project site was previously expressed or has been expressed since the most recent consultation with appropriate Native American groups (SCLA 2006).

No significant paleontological resources have been identified or recorded in or near the former George AFB. The site is located on young to old alluvium and no paleontological resources have been encountered at SCLA previously; the potential for such resources is very low in these types of alluvial deposits (SCLA 2006).

3.9.2.3 Cultural Resources at El Mirage Airport

Site-specific information about cultural resources at and in the immediate vicinity of El Mirage Airport has not yet been provided. In the event that El

Mirage Airport was selected as the location for the LRE site and training facilities, a site-specific cultural resources study would need to be conducted to adequately describe existing cultural resources at the airport and in its vicinity.

3.10 SOCIOECONOMICS

3.10.1 Definition of Resource

Socioeconomics is defined as the basic attributes and resources associated with the human environment, particularly population and economic activity. Human population is affected by regional birth and death rates as well as net in- or out-migration. Economic activity typically comprises employment, personal income, and industrial growth. Impacts on these two fundamental socioeconomic indicators can also influence other components such as housing availability and public services provision.

Socioeconomic data shown in this section are presented at the county, state, and national level to analyze baseline socioeconomic conditions in the context of regional, state, and national trends. Data have been collected from previously published documents issued by Federal, state and local agencies; from state and national databases (e.g., U.S. Bureau of Economic Analysis' *Regional Economic Information System*) and from interviews with representatives from relevant agencies (e.g., California State Employment Development Department).

Socioeconomic data are provided for both the City of Adelanto and the City of Victorville. Both regions have populations that are important to both the Proposed Action and alternative.

3.10.2 Existing Conditions

3.10.2.1 Population

Both Victorville and Adelanto are rapidly growing cities in the County of San Bernardino. The California Department of Finance ranks Victorville as California's 15th fastest growing city by percentage, increasing by 64 percent between 2000 and 2007 (from a population of 64,029 in 2000 to 102,538 in 2007), and it ranks Adelanto as California's 23rd fastest growing city for the same time frame, increasing by 49.7 percent (from a population of 18,130 in 2000 to 27,139 in 2007) (State of California, Department of Finance 2006). Both Victorville and Adelanto are projected to continue to grow at similarly high rates.

San Bernardino County is ranked as California's fifth largest county with just over 2.0 million people. The County is in a state of rapid growth, adding 34,030

people between 2006 and 2007 (1.71 percent). San Bernardino County follows only three other counties (Los Angeles, Riverside, and San Diego) in the numeric change in population between 2006 and 2007 (State of California, Department of Finance 2007).

3.10.2.2 Job Growth and Unemployment

Employment

Victorville is located within southwestern San Bernardino County and situated in a geographic subregion of the Southwestern Mojave Desert known as Victor Valley, or the High Desert. The High Desert area is largely dependant on the surrounding community for employment. The U.S. Census Bureau and the Southern California Association of Governments have determined that 38.5 percent of the High Desert labor force commutes (City of Victorville 2007).

The commuters are generally in the skilled labor, managerial, and professional trades, since it is unlikely that people would commute long distances for lower paying, low skilled jobs. The majority of the commuters remain in San Bernardino County (83 percent), Los Angeles (11 percent), Riverside (3 percent), and Orange (2 percent) counties (City of Victorville 2007).

Top employers in Victorville include SCLA (1,190 employees), City of Victorville (1,280 employees), and Victor Valley College (1,150 employees) (City of Victorville 2007). Major employers in the City of Adelanto include Apex Bulk Commodities, Northwest Pipe and Casing Company, and Safeway Sign Company (County of San Bernardino 2005).

As with population, County employment levels have increased over the past 5 years, experiencing a rapid cumulative increase of 114,287 jobs (15.5 percent overall growth) between 2001 and 2005. Total job growth in San Bernardino County exceeded total job growth in California (4.2 percent) and the U.S. (4.3 percent) during the same period (U.S. Bureau of Economic Analysis [U.S. BEA] 2007).

Unemployment

The unemployment rate in San Bernardino County in 2006 was 4.7 percent. This is lower than the City of Victorville (5.8 percent), City of Adelanto (7.3 percent), State of California (4.9 percent), and national levels (6.4 percent). From 2000 through 2006, unemployment rates in the County of San Bernardino, the City of

Victorville, and the City of Adelanto followed similar trends. In 2000, unemployment rates were similar to unemployment rates reported for 2006. Unemployment rates rose in 2001, 2002, and 2003, and then began to decrease in 2004, 2005, and 2006 (State of California 2007).

Job Composition

Table 3-3 presents the distribution of jobs by employment sector in San Bernardino County for 1990, 2000, and 2005. The employment sectors providing the greatest number of jobs in San Bernardino County for all three time periods are *services*, *government*, and *retail trade*. Together, these three employment sectors accounted for 66.1 percent of all jobs in 2005 in San Bernardino County (U.S. BEA 2006).

Table 3-3. San Bernardino County Employment by Industry (1995, 2000, and 2005)

Employment Sector	1995	2000	2005	Total Change 1995-2005
Farm	5,057	5,588	3,997	-21.0%
Non-Farm	588,911	716,418	849,918	44.3%
Ag., Forestry, Fishing, & Mining	9,013	8,559	2,364	-73.8%
Construction	33,708	44,877	61,255	81.7%
Manufacturing	58,693	75,225	70,404	20.0%
Transportation & Public Utilities	35,881	45,207	54,049	50.6%
Wholesale Trade	26,901	34,497	36,678	36.3%
Retail Trade	118,129	131,761	106,024	-10.2%
Finance, Insurance, Real Estate	31,699	45,940	64,932	104.8%
Services	169,459	211,197	324,751	91.6%
Govt. and Govt. Enterprises	105,428	119,155	129,461	22.8%
Federal, Civilian	12,195	11,237	12,258	0.5%
Military	17,800	18,557	18,765	5.4%
State and Local	75,433	89,361	98,438	30.5%

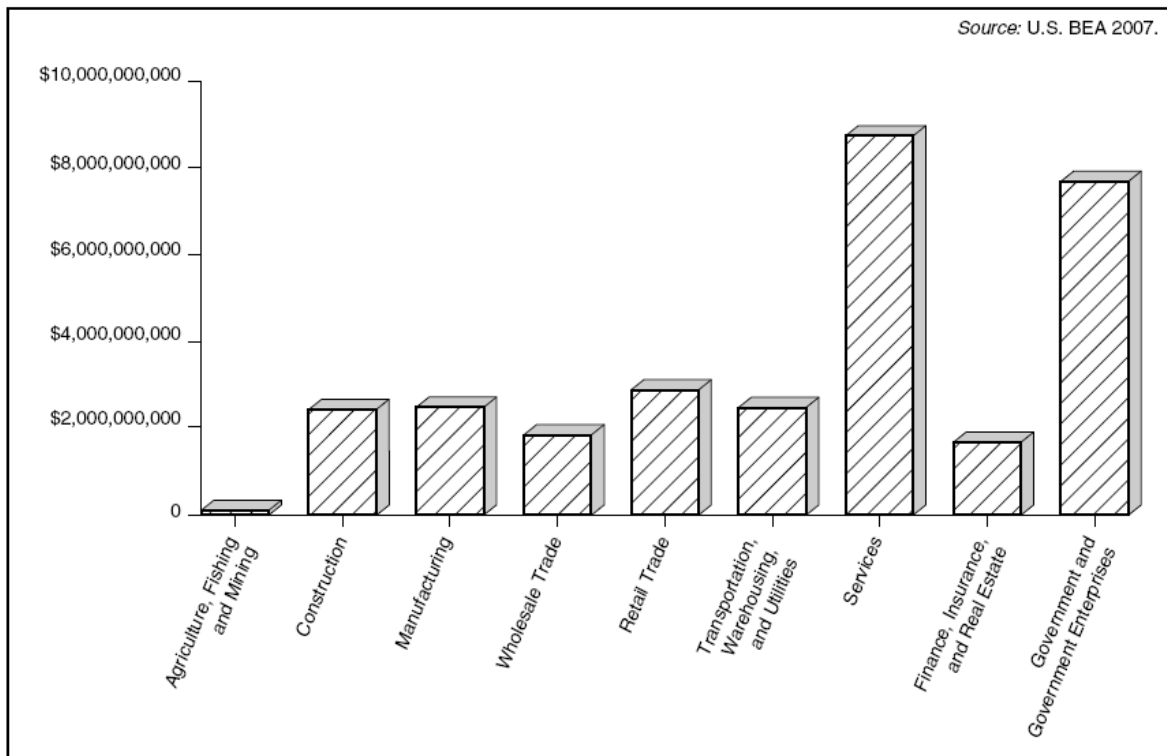
Source: U.S. BEA 2007.

Employment in the *government* sector comprises *state and local government*, *Federal military* and *Federal civilian* jobs. *Government* employment increased by 30.5 percent (23,005 jobs) between 1995 and 2005. Of the 129,461 *government* jobs in the County in 2005, 98,438 (76.0 percent) comprised *state and local government* employees, 12,258 (9.5 percent) comprised *Federal military* employees, and 18,765 (14.5 percent) comprised *Federal civilian* employees (U.S. BEA 2007).

Earnings

Figure 3-10 presents average annual earnings per industrial sector in San Bernardino County in 2005 when the County had total earnings of approximately \$31.4 billion, an increase of 49.7 percent over 2000. Greatest earnings were reported in the *services* (\$8.7 billion), *government* (\$7.7 billion) and *retail trade* (\$2.9 billion) sectors. Included within the *government* sector are *state and local*, *Federal military*, and *Federal civilian* categories which reported 2005 earnings of \$5.5 billion, \$1.2 billion, and \$929 million, respectively.

Per capita personal income in San Bernardino County for 2005 was \$26,074, 70.6 percent of California's average (\$36,936) and 75.6 percent of the national average (\$34,471) (U.S. BEA 2007).



EA

Annual Earnings Per Industrial Sector
San Bernardino County (2006)

3-10

SCLA

Approximately 2,000 people are currently employed at SCLA; 500 at the federal prison complex, 500 in aviation, and 1,000 in other services (commercial, logistics, etc.) (SCLA 2007). No full- or part-time personnel of the 163 RW are currently assigned to SCLA.

El Mirage Airport

No full- or part-time personnel of the 163 RW are currently assigned to El Mirage Airport. Additional site specific socio-economic information at and in the immediate vicinity of El Mirage Airport has not been provided. AMEC is continuing to seek these data and will incorporate them as they become available.

3.11 ENVIRONMENTAL JUSTICE

3.11.1 Definition of Resource

In order to comply with Executive Order 12898 (*Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*), ethnicity and poverty status in the vicinity of SCLA and EL Mirage Airport were examined and compared to regional, state, and national data to determine if any minority or low-income communities could potentially be disproportionately affected by implementation of the Proposed Action.

In order to comply with Executive Order 13045 (*Protection of Children From Environmental Health Risks and Safety Risks*), the numbers of children under age 18 in the vicinity of SCLA and El Mirage Airport were examined and compared to city, county, state, and national levels. Additionally, locations near SCLA and El Mirage Airport where populations of children may be concentrated (e.g., child care centers, schools, and parks) were determined to address potentially disproportionate health and safety risks to children that may result from implementation of the Proposed Action.

Data used for the environmental justice and protection of children analysis were collected from the 2000 *Census of Population and Housing* (U.S. Bureau of the Census 2007); although these data are now 7 years old, they represent the most complete, detailed, and accurate statistics available addressing population distribution and income. Further, there are no indications that regional trends that have occurred since 2000 have significantly altered general population characteristics.

Environmental justice data are provided for both the City of Adelanto and the City of Victorville. Both regions have populations that are important to both the Proposed Action and alternative.

3.11.2 Existing Conditions

3.11.2.1 Minority and Low-Income Populations

Based on data contained in the 2000 Census of Population and Housing, the percentage of the City of Adelanto's population living below the poverty level is 22.2 percent, the highest percentages of the five geographic areas examined in

this analysis (Figure 3-11). The next highest poverty level is the City of Victorville (18.6 percent), then the County of San Bernardino (15.4 percent), State of California (13.9 percent), and lastly the nation at 13.3 percent (U.S. Bureau of the Census 2007).

The percentage of minority residents in the City of Adelanto (49.5 percent) is the highest among the five geographic areas examined for this analysis (see Figure 3-11). By comparison, minority residents comprise smaller percentages of the total population in the City of Victorville (38.9 percent), San Bernardino County (41.1 percent), the State of California (40.5 percent), and the nation (24.9 percent) (U.S. Bureau of the Census 2007).

3.11.2.2 Protection of Children

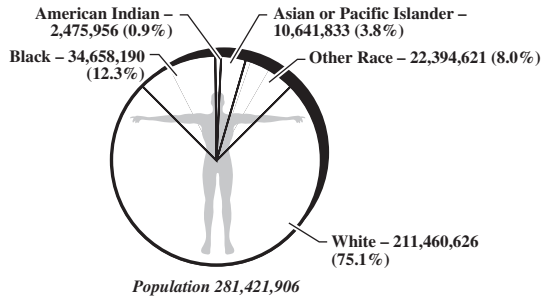
The City of Adelanto (38.0 percent) and the City of Victorville (34.2 percent) have the highest population represented by children under the age 18 among the five geographic areas examined for this analysis (see Figure 3-11). By comparison, children under the age of 18 comprise smaller percentages of the total population in San Bernardino County (32.3 percent), the State of California (27.3 percent), and the nation (25.7 percent) (U.S. Bureau of the Census 2007).

The Adelanto area is served by the Adelanto Elementary School District with a total of 12 elementary and middle schools. School enrollment for the Adelanto Elementary School District totaled 7,782 students in the 2005-2006 school year (NCLB 2006). The nearest schools to the SCLA are Adelanto Math and Science Academy (0.5 miles southwest), Harold George Visual and Performing Arts Magnet and Middle School (0.5 miles southeast), and Westside Park School (1.2 miles west).

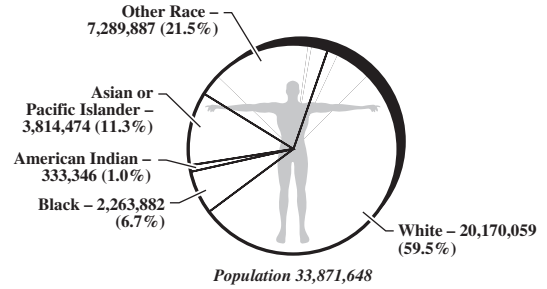
The Adelanto area is also served by the Victor Valley Union High School District (VVUHSD), which consists of 12 schools serving grades 7 through 12. Current school enrollment for the VVUHSD is approximately 9,500 students (VVUHSD 2007).

Source: U.S. Census Bureau 2007.

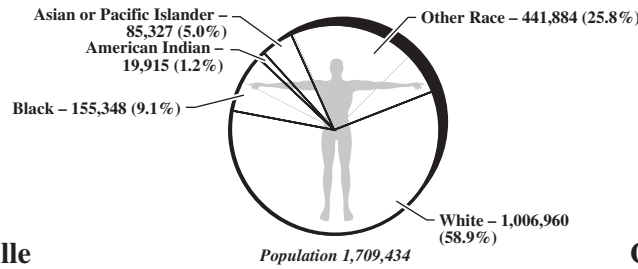
United States



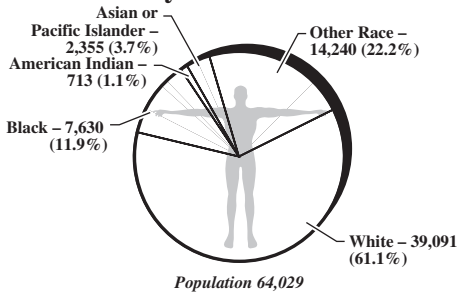
State of California



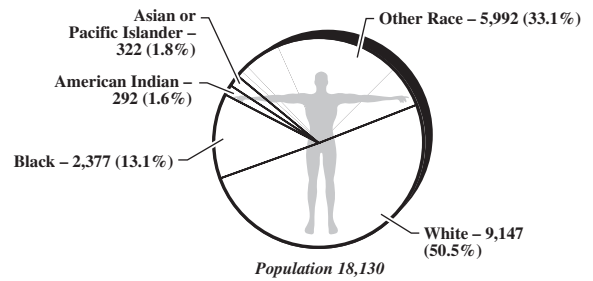
San Bernardino County



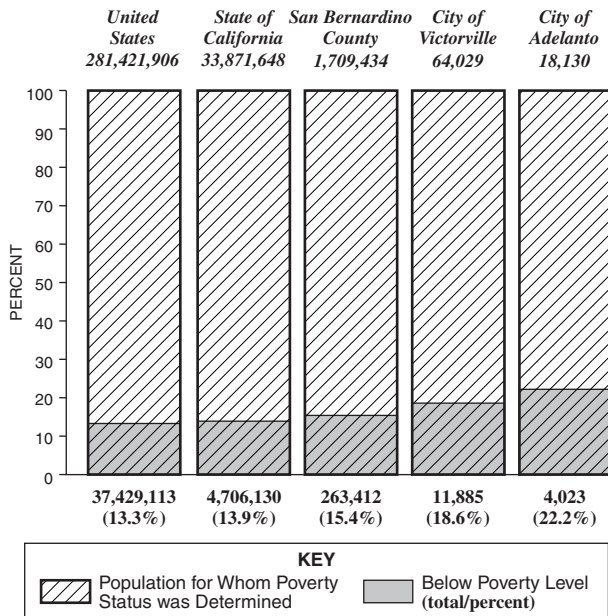
City of Victorville



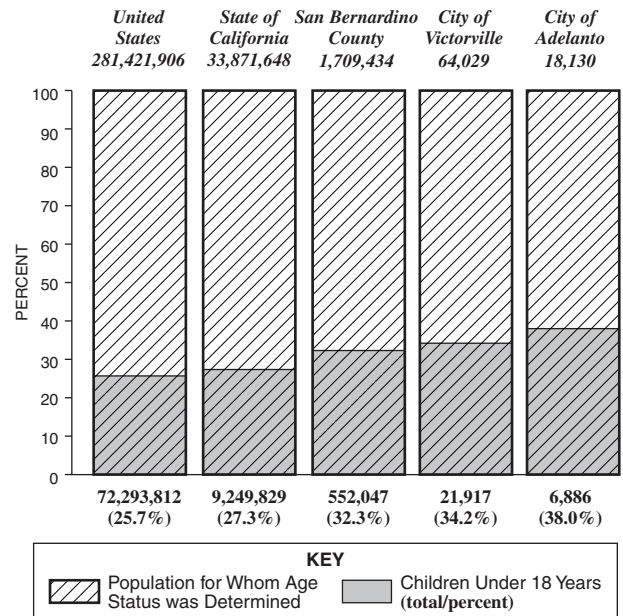
City of Adelanto



Poverty Status



Age Distribution



3.12 HAZARDOUS MATERIALS AND WASTES

3.12.1 Definition of Resource

Hazardous materials are defined as substances that pose a substantial threat to human health or the environment including carcinogenic, toxic, corrosive, combustible, explosive, flammable, or reactive chemicals (29 CFR 1920.1200). Hazardous wastes are defined as any liquid, solid, contained gas, or sludge waste with properties that are dangerous or potentially harmful to human health or the environment. In regulatory terms, a Resource Conservation and Recovery Act (RCRA) hazardous waste is any waste that appears on the lists of non-specific source wastes, source-specific wastes, or discarded chemical commercial products, or any waste that exhibits characteristics of ignitability, corrosivity, reactivity, or toxicity (40 CFR 261.21-24 & 31-33).

Issues associated with hazardous materials and wastes typically center around underground storage tanks (USTs); aboveground storage tanks (ASTs); and the storage, transport, and use of pesticides, bulk fuel, and petroleum, oil, and lubricants (POL). When such resources are improperly used in any way they can threaten the health and well-being of wildlife species, botanical habitats, soil systems, water resources, and people.

To protect habitats and people from inadvertent and potentially harmful releases of hazardous substances, DoD has dictated that all facilities develop and implement *Hazardous Waste Management Plans* and *Spill Prevention, Control, and Countermeasure Plans*. Also, DoD has developed the Environmental Restoration Program (ERP), intended to facilitate thorough investigation and cleanup of contaminated sites located at military installations. These plans and programs, in addition to established legislation (e.g., the Comprehensive Environmental Response, Compensation, and Liability Act and RCRA) effectively form the “safety net” intended to protect the ecosystems on which most living organisms depend.

3.12.2 Existing Conditions

3.12.2.1 Hazardous Material and Wastes at SCLA

SCLA is classified as a Large Quantity Generator of hazardous waste (USEPA 2007c). Formerly George AFB, the installation is a designated Superfund site, for

which monitoring, investigations, and cleanup activities have occurred continuously since the early 1990s. The ERP, formerly the Installation Restoration Program, was established to determine areas and types of contamination, as well as to prepare remedial investigation report and feasibility study reports for cleanup activities. A total of 22 ERP sites and 73 Areas of Concern were identified. There is ongoing groundwater monitoring for several areas within the airport property. To prepare for the closure of George AFB, the Air Force prepared Feasibility of Suitability for Transfer documentation for every parcel at the former base property. This process allows for the disposal of properties that are now considered clean, versus those properties still in the remedial study or cleanup process. Review of available data (site appearance, USGS map, California Department of Toxic Substance Control's [DTSC's] Hazardous Waste and Substances Site List [Cortese List], The Leaking Underground Storage Tank Information System [LUSTIS] and the USEPA Enviromapper) provide information regarding past uses on the project site that may have involved hazardous materials.

The DTSC Cortese List includes only the former George AFB within the project vicinity. The former base has been under extensive ongoing environmental review required prior to transferring the property from the U.S. Government to other entities. Much of the acreage associated with the former base has been determined to be clean enough to be transferred to other users and the real property transactions have been executed, including the land associated with the current SCLA and its operations.

According to a database search conducted in October 2007, LUSTIS identifies the following leaking USTs within 1 mile of the project impact area:

- Turner Ford (17907 Adelanto Road) approximately 1 mile west of the site is listed as having diesel fuel oil and additives impacted soil discovered upon tank closure. The leak was discovered and stopped in 1990. Impacted soil was excavated in April of 2000. The site remained under regulatory review as of 16 June 2000.
- Adelanto Shell (11660 Bartlett Road) approximately 1 mile west of the site is listed as having an automotive gasoline leak including MTBE resulting from a tank leak. The leak impacted soil with potential to impact drinking water aquifer in 5 to 20 years. The leak was discovered and stopped on 10

July 1998. The site remained under regulatory review as of 3 December 2001.

- Harken Marketing (11605 Bartlett Avenue) approximately 1 mile west of the site is listed as having an automotive gasoline leak discovered upon tank closure between 28 December 1989 and 5 January 1990. The site was listed as closed on the last entry dated 5 July 1990.
- Liquid Fuels Distribution System Ou-2 at the former George AFB located on Readiness Street approximately 1 mile east of the fuel farm site was discovered to have a jet fuel and additives leak discovered upon tank closure in 1994. In April 2000, soil was excavated and disposed of in addition to water removal and enhanced biodegradation. The site was listed as under regulatory review as of 25 September 1997.

The USEPA Enviromapper lists sites that are required to or voluntarily report activities (including Superfund, toxic releases, water discharges, air emissions and hazardous waste handlers) to the USEPA. Numerous sites, as follows, are located within 1 mile of the project site.

- High Desert Power Project LLC (19000 Perimeter Road) approximately 1 mile northwest of the project site, is classified as a large-quantity generator of air emissions and hazardous wastes in compliance with regulatory requirements.
- Circle K Store #342 (11760 Bartlett Road), approximately 1 mile west of the project site is regulated for hazardous wastes.
- First Logistex Inc. (11930 Aztec Lane), approximately 0.5 miles west of the project site, is listed as a transporter of hazardous wastes.
- Amko Service Company (17909 Adelanto Road), approximately 0.5 miles west of the project site, is listed as a large-quantity generator of hazardous wastes.
- USA Transport (16099 Adelanto Road), approximately 0.5 miles southwest of the project site, is listed as a transporter of hazardous wastes.

- Facilities operated by the City of Victorville (18550 Readiness Street), approximately 1 mile east of the project site, is listed as a small-quantity generator of hazardous wastes.
- Sumiden Wire Products Corporation (13290 Sabre Boulevard), approximately 1 mile east of the project site, is listed as a small-quantity generator of hazardous wastes.
- Artesian Spas (13198 Mustang Street), approximately 1 mile east of the project site, is regulated for toxic releases and listed as a small-quantity generator of hazardous wastes.
- The former George AFB is also listed as regulated through the Superfund program for hazardous wastes (SCLA 2006).

3.12.2.2 Hazardous Material and Waste at El Mirage Airport

General Atomics, the primary tenant at El Mirage Airport, is listed as a Small Quantity Generator of hazardous waste (USEPA 2007d). Site-specific information about hazardous materials and wastes at El Mirage Airport has not yet been provided. In the event that El Mirage Airport was selected as the location for the LRE site and training facilities, a thorough review of site-specific hazardous materials and wastes would need to be conducted to adequately describe existing conditions at the airport and within its vicinity.

3.13 SAFETY

3.13.1 Definition of Resource

The FAA is responsible for ensuring the safe and efficient use of the nation's airspace by military and civilian aircraft and for supporting national defense requirements. In order to fulfill these responsibilities, FAA requirements include enactment of safety regulations, management of airspace, establishment and operation of a civil-military common system, and cooperative activities with the DoD. The primary concern with regard to military training flights is the potential for aircraft mishaps (i.e., crashes), which may be caused by mid-air collisions with other aircraft or objects, weather difficulties, or bird-aircraft strikes.

3.13.2 Existing Conditions

3.13.2.1 Aircraft Mishaps

Five mishap classifications have been defined by the USAF. Class A mishaps result in a fatality or permanent total disability; total cost in excess of \$1 million for injury, occupational illness, and property damage; or destruction or damage beyond repair to military aircraft. Class B mishaps result in a permanent partial disability; total cost in excess of \$200,000 but less than \$1 million for injury, occupational illness, and property damage; or hospitalization of five or more personnel. Class C mishaps result in total damages between \$20,000 and \$200,000, and Class D mishaps result in total damages between \$2,000 and \$12,000. The fifth mishap category, Class E, includes occurrences that do not meet reportable mishap classification criteria, but are deemed important to investigate and/or report for mishap prevention.

In general, information regarding UAV mishaps is limited due to the relatively new status of this system. Predator UAV loss rates per flying hour have decreased from a rate of approximately 40/100,000 flight hours in 2001 to an all-time low of 15.3/100,000 flight hours in 2006 (163 RW 2007). Aircraft mishaps at SCLA average approximately one per year with no recorded fatalities or serious injuries; however, because SCLA is a civilian airport, mishaps are not recorded in accordance with USAF classifications (SCLA 2007).

Site-specific information about aircraft mishaps at El Mirage Airport has not yet been provided. AMEC is continuing to seek these data and will incorporate them as they become available.

3.13.2.2 Safety Zones at SCLA

The following is a discussion of each of the safety zones at SCLA, including their function and their land use compatibility characteristics. See Figure 3-12 for the location and arrangement of safety zones at SCLA.

Zone 1

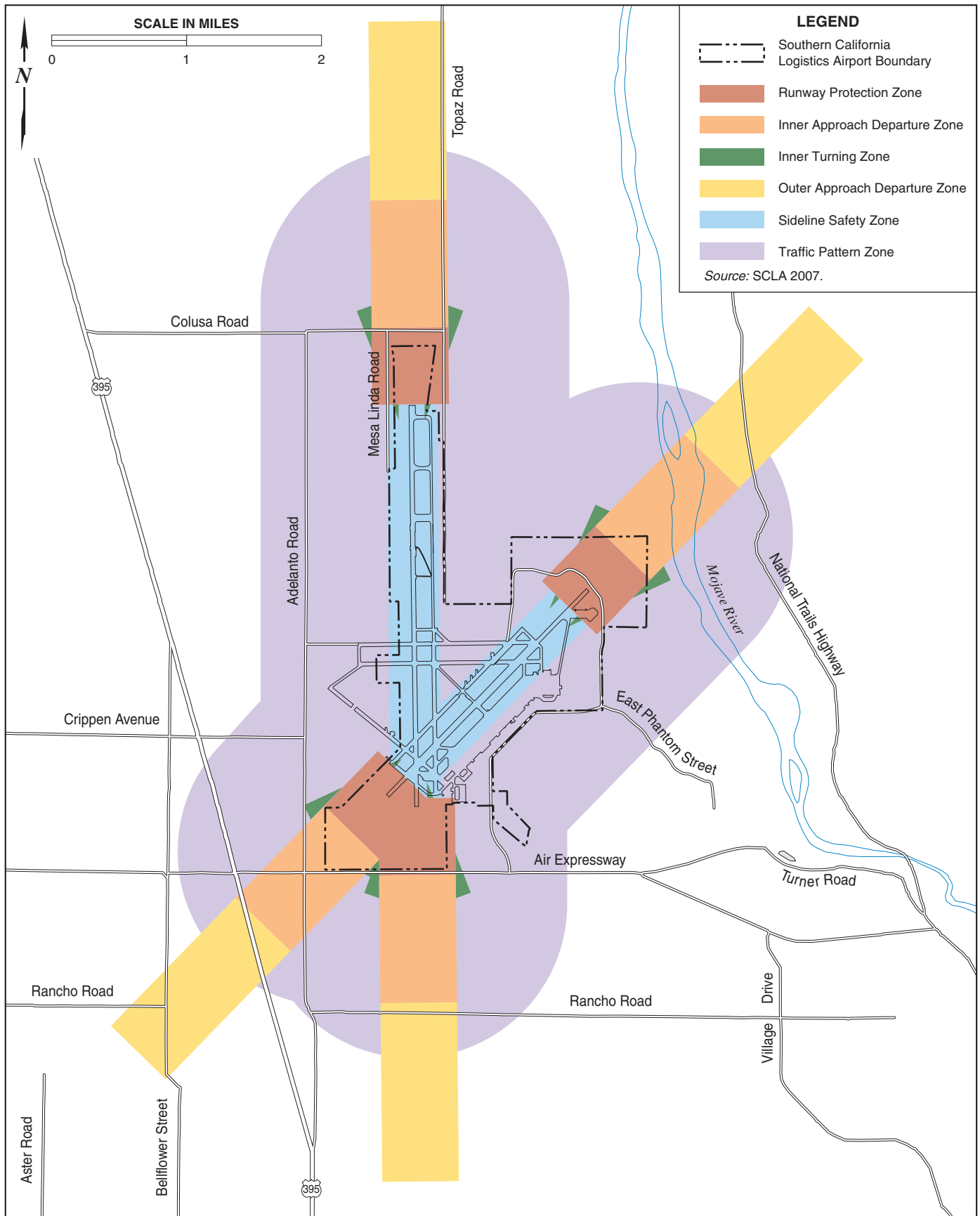
Zone 1 is the Runway Protection Zone (RPZ). For airports with no military operations, this zone is classified by FAA criteria. Because SCLA currently supports military operations, this zone is established using the military's Air Installation Compatible Use Zone (AICUZ) criteria. The resulting safety zone covers a larger portion of land at each runway end than it would if it were based exclusively on non-military operations.

Ideally, land in Zone 1 should be owned and controlled by the airport to ensure that no new buildings are constructed in this area. Residential uses should be low in density and located on the extreme edges of the zone.

Zone 2

Zone 2 is the Inner Approach/Departure Zone. This zone extends beyond the RPZ and includes land that is overflowed at low altitudes, typically on approach or departure. This element is also based in part on the AICUZ program. According to the California Airport Land Use Planning Handbook, Zone 2 and the RPZ should collectively encompass the location of 30 to 50 percent of near-airport aviation accidents.

Residential use within Zone 2 should be allowed only on large agricultural parcels, and nonresidential use should be low in density. Several land uses should be avoided in this area such as schools, daycare centers, hospitals, and nursing homes. Additionally, aboveground storage of fuel should be prohibited in this area.



EA

**Safety Zones at
Southern California Logistics Airport**

**FIGURE
3-12**

Zone 3

Zone 3 covers the Inner Turning Zone and primarily applies to general aviation airports. Because SCLA experiences general aviation operations, this element was incorporated. For approaches, this zone covers lands where general aviation aircraft typically turn from the base to final approach legs of the standard traffic pattern, and continue their descent from the traffic pattern altitude. For departures, this safety zone includes the lands where aircraft are typically turning towards their en-route heading.

Residential uses should be limited to very low density, unless they are not acceptable due to excessive noise, in which case they should be discouraged or prohibited altogether. Nonresidential uses should be limited to low intensity users. Schools, daycare centers, hospitals, and nursing homes are some of the land uses that should be avoided, as well as the aboveground storage of bulk fuel.

Zone 4

Zone 4 is the Outer Approach/Departure Zone. This zone is extended beyond Zone 3 along the centerline of the runway. This zone is a component of the military runway safety diagram derived from the California Airport Land Use Planning Handbook. It is generally used for runways with straight-in approaches, such as the one established for SCLA's Runway 17.

Residential uses should be limited to very low density, unless they are not acceptable due to excessive noise, in which case they should be discouraged or prohibited altogether. Nonresidential uses should be limited to low intensity uses. Schools, daycare centers, hospitals, and nursing homes are some of the land uses that should be avoided, as well as the aboveground storage of bulk fuel.

Zone 5

Zone 5 is the Sideline Safety Zone, which is parallel to the runway and is established for general aviation aircraft in case directional control is lost on takeoff. Typically, this area is part of the airport property.

Aviation-related structures should be allowed provided they meet height limit restrictions. Residential uses should be avoided unless they are related to

aviation, such as pilots' quarters. Nonresidential uses should be low intensity and structures such as schools, daycare centers, hospitals, and nursing homes are some of the land uses that should be avoided.

Zone 6

Zone 6 is the Traffic Pattern Zone and includes all other parts of the regular traffic patterns and pattern entry routes. There is a relatively low likelihood of an aircraft mishap in this zone.

Residential uses of all densities are allowed in this zone, as well as most nonresidential uses. Users with very high intensity, such as outdoor stadiums or amphitheatres, should be avoided. Schools, daycare centers, hospitals, and nursing homes are some of the land uses that should also be avoided (SCLA 2007).

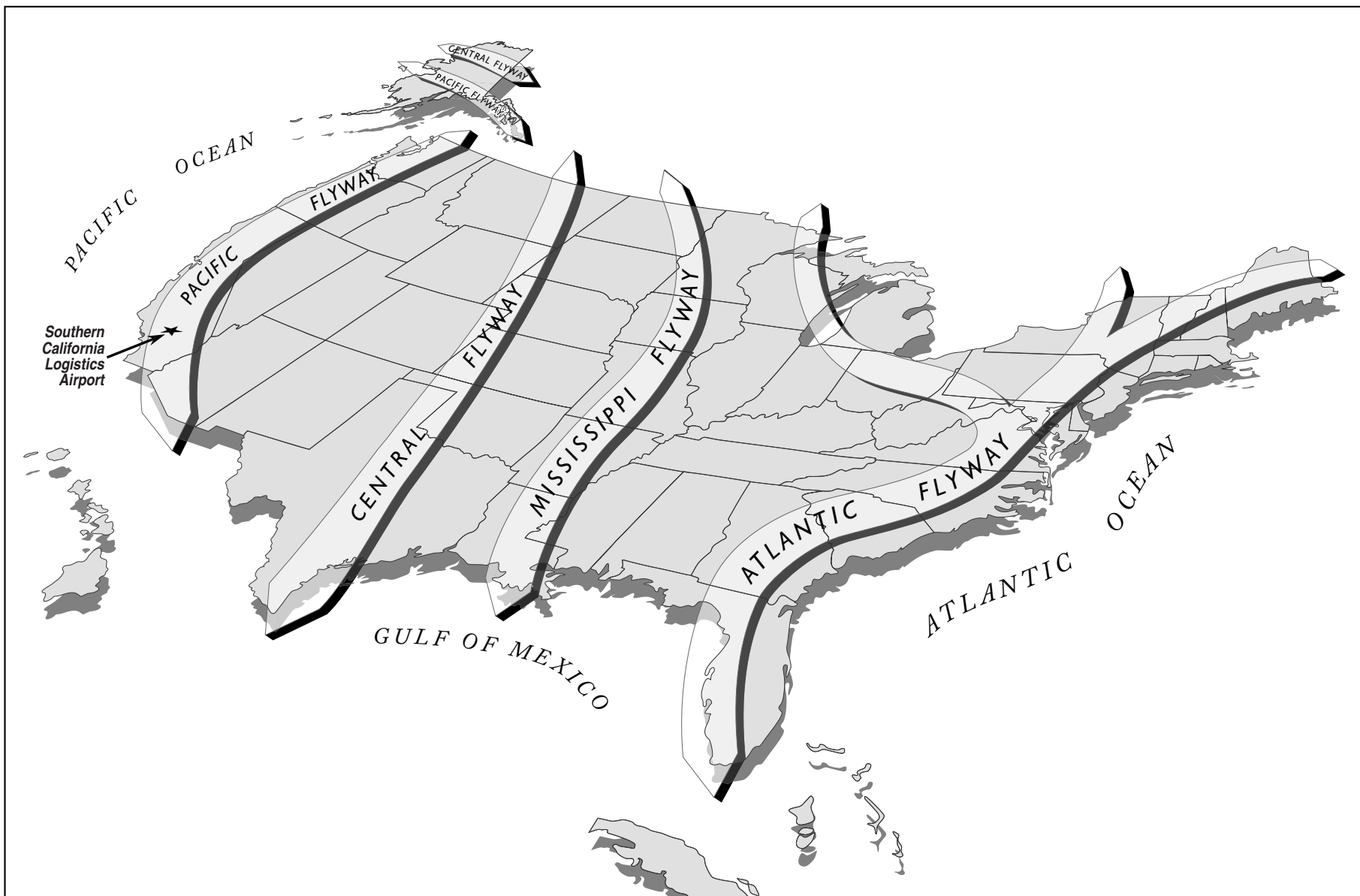
3.13.2.3 Safety Zones at El Mirage Airport

Site-specific information about safety zones and programs at El Mirage Airport has not yet been provided. AMEC is continuing to seek these data and will incorporate them as they become available.

3.13.2.4 Bird-Aircraft Strike Hazard

Bird-Aircraft Strike Hazard (BASH) is defined as the threat of aircraft collision with birds or other wildlife during flight operations and is a safety concern at all airfields due to the frequency of aircraft operations and the possibility of encountering birds at virtually all altitudes. Most birds fly close to ground level; correspondingly, more than 95 percent of all reported bird-strikes occur below 3,000 feet above ground level (AGL). At most military installations, about half of reported bird strikes occur in the immediate vicinity of the airfield and another 25 percent occur during low-altitude local training exercises.

Bird-aircraft strikes present a potential threat to 163 RW aircraft and aircrew safety due to both SCLA and El Mirage Airport's locations beneath the Pacific Flyway (Figure 3-13). Wind direction changes and overcast conditions are usually associated with poor visibility and higher bird activity, increasing the probability of bird strikes.



EA

Migratory Flyways over the United States

FIGURE
3-13

Site-specific information about bird-strikes at SCLA and El Mirage Airport has not yet been provided and may not be available due to the lack of current DoD flight operations at the airfields. AMEC is continuing to seek these data and will incorporate them if they are provided.

3.14 AIRSPACE MANAGEMENT

3.14.1 Definition of Resource

Airspace management is defined by the USAF as the coordination, integration, and regulation of the use of airspace of defined dimensions. The objective is to meet military training requirements through the safe and efficient use of available navigable airspace in a peacetime environment while minimizing the impact on other aviation users and the public (AFI 13-201). There are two categories of airspace or airspace areas: regulatory and nonregulatory. Within these two categories, further classifications include *controlled*, *uncontrolled*, *special use*, and *other airspace*. The categories and types of airspace are dictated by: (1) the complexity or density of aircraft movements; (2) the nature of the operations conducted within the airspace; (3) the level of safety required; and (4) national and public interest in the airspace.

3.14.1.1 Controlled Airspace

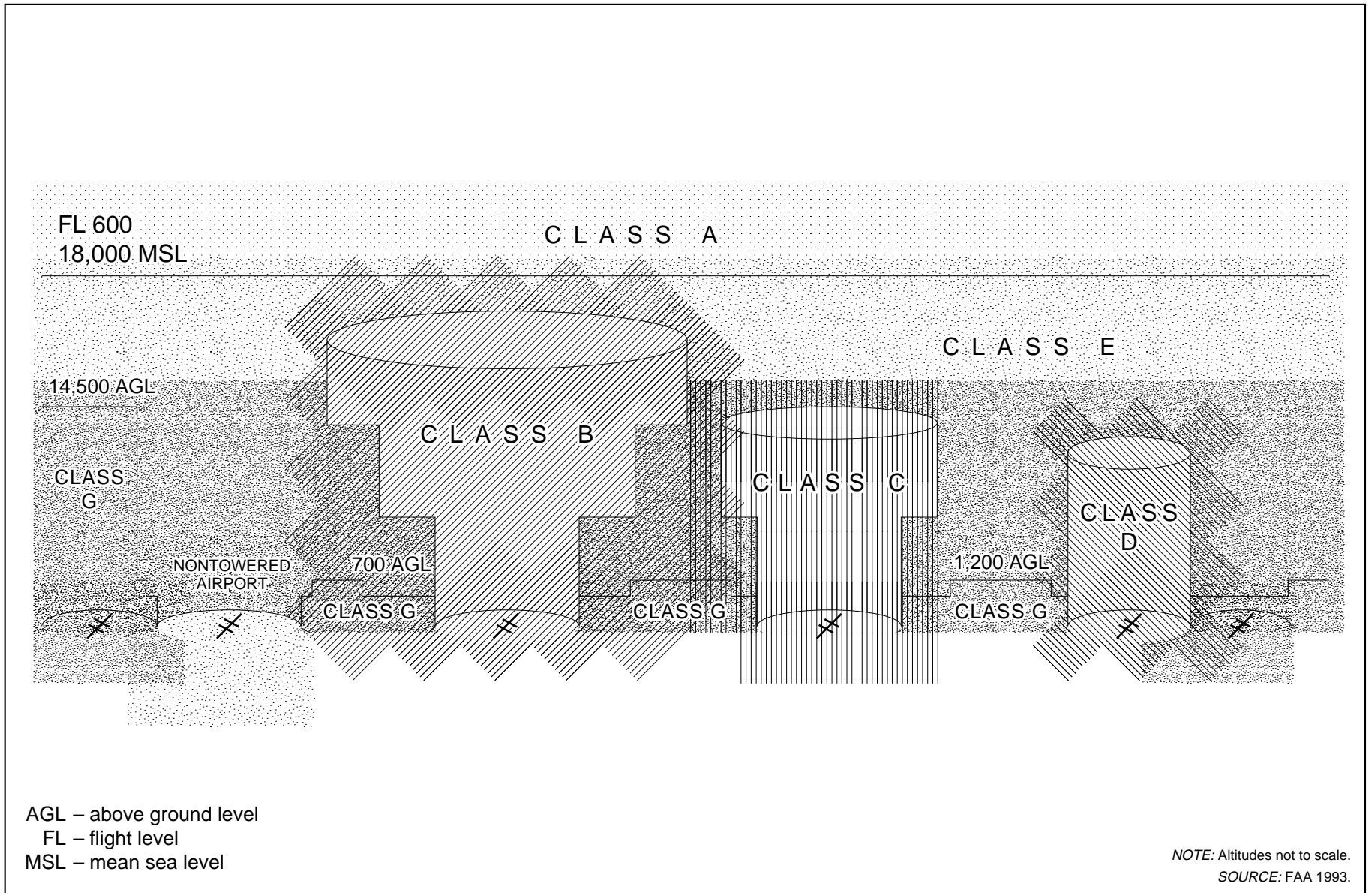
Controlled airspace is a generic term that encompasses the different classifications of airspace (Class A, B, C, D, and E airspace shown in Figure 3-14) and defines dimensions within which air traffic control (ATC) service is provided to Instrument Flight Rules (IFR) flights and to Visual Flight Rules (VFR) flights (USDOT 1994). All military and civilian aircraft are subject to Federal Aviation Regulations (FARs).

Class A Airspace

Class A airspace includes all flight levels or operating altitudes over 18,000 feet MSL. Formerly referred to as a Positive Control Area, Class A airspace is dominated by commercial aircraft utilizing routes between 18,000 and 60,000 feet MSL.

Class B Airspace

Class B airspace typically comprises contiguous cylinders of airspace, stacked upon one another, extending from the surface up to 14,500 feet MSL. To operate in Class B airspace, pilots must contact appropriate controlling authorities and receive clearance to enter the airspace. Additionally, aircraft operating within Class B airspace must be equipped with specialized electronics that allow air



FIGURE

EA

FAA Airspace Classification

3-14

traffic controllers to accurately track aircraft speed, altitude, and position. Class B airspace is typically associated with major metropolitan airports.

Class C Airspace

Airspace designated as Class C can generally be described as controlled airspace that extends from the surface or a given altitude to a specified higher altitude. Class C airspace is designed and implemented to provide additional ATC into and out of primary airports where aircraft operations are periodically at high-density levels. All aircraft operating within Class C airspace are required to maintain two-way radio communication with local ATC entities.

Class D Airspace

Class D airspace encompasses a 5-statute-mile radius of an operating ATC-controlled airport, extending from the ground to 2,500 feet AGL or higher. All aircraft operating within Class D airspace must be in two-way radio communication with the ATC facility.

Class E Airspace

Class E airspace can be described as general controlled airspace. It includes designated federal airways consisting of the high altitude (J or “Jet” Route) system and low altitude (V or “Victor” Route) system. Class E airspace extends upward from either the surface or a designated altitude to the overlying or adjacent controlled airspace. Also included in this class of airspace are Federal Airways, airspace beginning at either 700 or 1,200 feet AGL used to transition to or from the terminal or enroute environment and enroute domestic and offshore airspace, designated below 18,000 feet MSL.

3.14.1.2 Uncontrolled Airspace

Uncontrolled airspace (Class G) is not subject to restrictions that apply to controlled airspace. Limits of uncontrolled airspace typically extend from the ground surface to 700 feet AGL in urban areas and from the ground surface to 1,200 feet AGL in rural areas. Uncontrolled airspace can extend above these altitudes to as high as 14,500 feet MSL if no other types of controlled airspace have been assigned. ATC does not have authority to exercise control over aircraft operations within uncontrolled airspace. Primary users of uncontrolled airspace are general aviation aircraft operating in accordance with VFR.

3.14.1.3 Special Use Airspace

Special use airspace consists of airspace within which specific activities must be confined, or wherein limitations are imposed on aircraft not participating in those activities. Most special use airspace is depicted on aeronautical charts, including hours of operation, altitudes, and the agency controlling the airspace. All special use airspace descriptions are contained in FAA Order 7400.8.

Prohibited and Restricted Areas are regulatory special use airspace and are established in FAR Part 73 through the rulemaking process. Warning Areas and Military Operating Areas (MOAs) are nonregulatory special use airspace.

Warning Areas are airspace of defined dimensions over international waters that contain activity that may be hazardous to nonparticipating aircraft. Because international agreements do not provide for prohibition of flight in international airspace, no restrictions to flight are imposed. As such, warning areas are established in international airspace to alert pilots of nonparticipating aircraft to potential danger.

MOAs are airspace of defined vertical and lateral limits outside of controlled airspace that are used to separate certain military flight activities from IFR traffic, and to identify for VFR traffic the areas where concentrated military aircraft operations may occur. When a MOA is active, IFR traffic may be cleared to enter and pass through the area if adequate IFR separation criteria can be met. Nonparticipating VFR aircraft are not prohibited from entering an active MOA; however, extreme caution is advised when such aircraft transit the area during military operations.

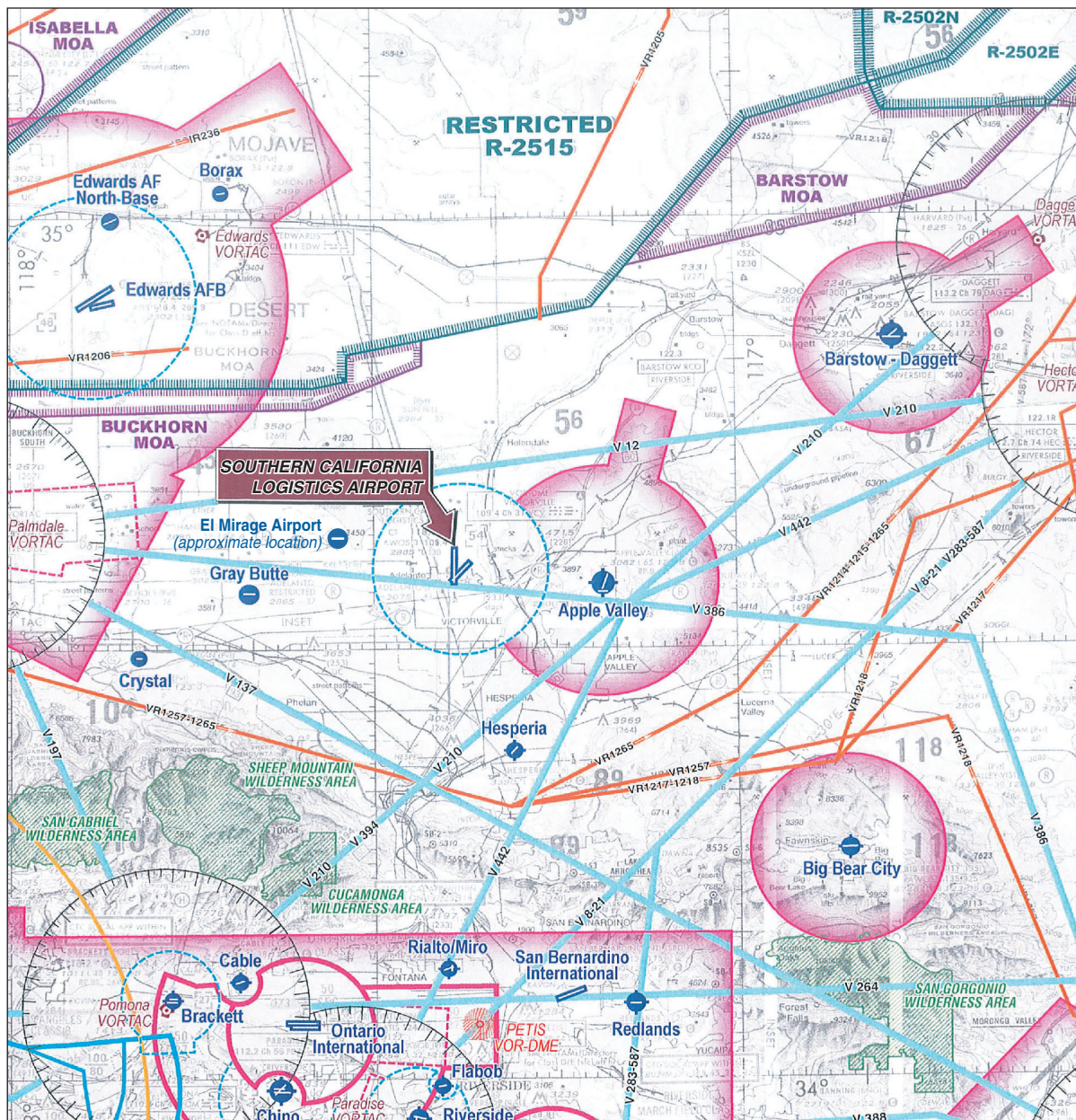
All MOAs within the U.S. are depicted on sectional aeronautical charts identifying the exact area, the name of the MOA, altitudes of use, published hours of use, and the corresponding controlling agency.

3.14.2 Existing Conditions

3.14.2.1 SCLA

Airspace

The immediate airspace surrounding SCLA with a radius of 5 miles is classified as Class D (see Figure 3-15). This Class D airspace starts at ground level and



LEGEND

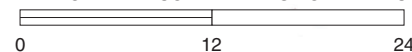
- Airport with other than hard-surfaced runways
- Airport with hard-surfaced runways 1,500' to 8,069' in length
- Airports with hard-surfaced runways greater than 8,069' or some multiple runways less than 8,069'
- Non-Directional Radiobeacon
- VORTAC
- VHF Omni Range (VOR)
- VOR-DME

- Compass Rose
- Class B Airspace
- Class C Airspace
- Class D Airspace
- Class E Airspace
- Class E Airspace with floor 700 ft. above surface
- Visual Flight Rules Routes
- Wilderness Area
- Military Training Routes

- Mode C
- Military Operations Area - MOA
- Restricted Areas

Source: Los Angeles Sectional Chart, US Department of Commerce, National Oceanic and Atmospheric Administration 2003.

APPROXIMATE SCALE IN NAUTICAL MILES



EA

**Airspace in the Vicinity of
Southern California Logistics Airport and El Mirage Airport**

**FIGURE
3-15**

extends to 5,400 feet MSL. SCLA is located west of Apple Valley Airport's Class E airspace which begins at 700 feet AGL and extends upward to Class A space. Since Class D airspace is more restrictive than Class E, a portion of SCLA's Class D airspace overlaps into Apple Valley Airport's Class E Airspace. To the north of SCLA are two large Restricted Areas (R-2515 and R-2502) that start at ground level and extend upward with no altitude limit. There are several MOAs within the region; the Barstow and Buckhorn MOAs are in close proximity to SCLA. Joshua Approach Control provides en route traffic control functions to and from SCLA. The SCLA ATC tower controls traffic in the airport's Class D airspace (SCLA 2007).

Aircraft Inventory

Though very few aircraft are "based" at SCLA in the traditional sense, myriad aircraft types use the airfield and associated facilities, including air carrier and air taxi, general aviation, and military aircraft. Typical air carrier aircraft include 747s, 757s, 767s, and DC-10s; typical air taxi aircraft include 737s and Citation 500s; typical general aviation aircraft include single-engine variable pitch and fixed pitch propeller (prop) aircraft and Beech Baron 58Ps; and the military aircraft inventory comprises approximately 80 percent air cargo aircraft such as C-17s and C-130s, and approximately 20 percent fighters such as F-18s and F-22s. In addition, the current aircraft inventory at SCLA includes unmanned aerial vehicles (UAVs).

Operations

Although, the majority of operations at SCLA are categorized as General Aviation, military aircraft operations do represent the second-largest group of aircraft operations at SCLA. The smallest contributor of aircraft operations at SCLA are categorized as air carrier and air taxi. There are no regularly scheduled commercial flights at SCLA; however, there is a regularly scheduled air taxi service. In 2006, total operations at SCLA were approximately 60,000.

Runways

Runway 17/35 is the primary runway at SCLA and is 15,050 feet long and 150 feet wide. It is estimated that 75 percent of approaches and departures occur on Runway 17. The secondary runway, Runway 03/21, is 9,138 feet long and is also 150 feet in width. Approximately 20 percent of SCLA operations occur on

Runway 21. The remaining 5 percent are split between Runways 03 and 35. Runway 35 is generally used for two weeks every year when a shift in prevailing winds require the closure of Runway 17 (SCLA 2007).

3.14.2.2 El Mirage Airport

Airspace

No controlled or categorized airspace exists within the immediate vicinity of El Mirage Airport, which is located 11 nautical miles (nm) to the west of SCLA's Class D airspace and 21 nm to the west of Apple Valley's Class E Airspace, and to the south of R-2515 and R-2502. El Mirage Airport is a UAV test facility and operates under a Certificate of Authorization from the FAA and limits operations to airspace within a radius of 10 nm of the facility.

Aircraft Inventory

Aircraft based at El Mirage Airport are almost entirely single-engine UAVs with the exception of single engine variable pitch prop aircraft that support UAV operations as "chase planes."

Operations

UAV operations at EL Mirage Airport average approximately two sorties and 192 closed patterns per day. While a UAV is in flight, a "chase plane" is required to be within close proximity; therefore, for every UAV operation there is a single engine variable pitch prop aircraft overflight operation, effectively doubling the number of daily operations at the airport.

Runways

El Mirage Airport has one runway (08/26) that is 3,700 feet in length and 150 feet wide; this primary runway also has paved overruns that total 1,300 feet in length. Virtually all approaches and departures occur on Runway 26.

SECTION 4

ENVIRONMENTAL CONSEQUENCES

Environmental impacts that would result from implementation of the Proposed Action by the 163^d Reconnaissance Wing (163 RW) of the California Air National Guard (ANG) are evaluated in this section. Analyses are presented by resource area, as presented in Section 3, Affected Environment.

4.1 AIR QUALITY

4.1.1 Approach to Analysis

The 1990 Amendments to the Clean Air Act (CAA) require that Federal agency activities conform to the State Implementation Plan (SIP) with respect to achieving and maintaining attainment of National Ambient Air Quality Standards (NAAQS) and addressing air quality impacts. The U.S. Environmental Protection Agency (USEPA) General Conformity Rule requires that a conformity analysis be performed which demonstrates that a Proposed Action does not: 1) cause or contribute to any new violation of any NAAQS in the area; 2) interfere with provisions in the SIP for maintenance or attainment of any NAAQS; 3) increase the frequency or severity of any existing violation of any NAAQS; or 4) delay timely attainment of any NAAQS, any interim emission reduction, goals, or other milestones included in the SIP for air quality. Provisions in the General Conformity Rule allow for exemptions from performing a conformity determination only if total emissions of individual nonattainment area pollutants resulting from the Proposed Action fall below the significant threshold values.

In addition, the Mojave Desert Air Quality Management District (MDAQMD) has established significance thresholds for air pollutants. Ozone (O₃) precursors include nitrogen oxides (NO_x) and reactive organic gases (ROG). (The term ROG is interchangeable with volatile organic compounds [VOCs] for this analysis. The primary distinction is that ROG is generally used by the California Air Resources Board [CARB], while VOC is generally used by the USEPA.) Projects that generate emissions in excess of the thresholds provided in Table 4-1 would have a significant air quality impact and would require a formal conformity determination (MDAQMD 2007).

Table 4-1. Significant Emission Thresholds

Pollutant	Annual Threshold (tons)	Daily Threshold (pounds)
Carbon Monoxide (CO)	100	548
NO _x	25	137
VOC	24	137
Sulfur oxides (SO _x)	25	137
PM ₁₀	15	82

Source: MDAQMD 2007.

4.1.2 Impacts

4.1.2.1 Proposed Action

Pollutant emissions associated with proposed facilities construction at Southern California Logistics Airport (SCLA) would include fugitive dust emissions during and related to site preparation activities, and combustion emissions from vehicles and heavy-duty equipment used during construction. Operational emissions would be generated by fuel combustion associated with 163 RW's MQ-1 Launch and Recovery Element (LRE) training operations. SCLA is located within the Mojave Desert Air Basin, which is classified as a *nonattainment* area for the state and Federal O₃ and particulate matter equal to or less than ten microns in diameter (PM₁₀) standards (California Air Resources Board [CARB] 2007; USEPA 2007a).

Fugitive Dust Emissions

Under implementation of the Proposed Action, fugitive dust (i.e., PM₁₀, a criteria pollutant) would be generated from construction activities including grading. Fugitive dust emissions can vary substantially daily depending on levels of activity, specific operations, and prevailing meteorological conditions. In accordance with Mojave Desert Air Quality Management District (MDAQMD) guidelines, implementation of the following control measures is required during construction activities associated with the Proposed Action (MDAQMD 2007):

- Use periodic watering for short-term stabilization of disturbed surface area to minimize visible fugitive dust emissions. Use of a water truck to maintain moist disturbed surfaces and actively spread water during

visible dusting episodes shall be considered sufficient to maintain compliance;

- Take actions sufficient to prevent project-related trackout (deposition of visible bulk material) onto paved surfaces;
- Cover loaded haul vehicles while operating on publicly maintained paved surfaces;
- Stabilize graded surfaces upon completion of grading when subsequent development is delayed or expected to be delayed more than thirty days, except when such a delay is due to precipitation that dampens the disturbed surface sufficiently to eliminate visible fugitive dust emissions;
- Cleanup project-related trackout or spills on publicly maintained paved roads within 24 hours; and
- Reduce non-essential earth moving activities under high wind conditions. A reduction in earth-moving activity when visible dusting occurs from moist and dry surfaces due to wind erosion shall be considered sufficient to maintain compliance (MDAQMD 1996).

The 163 RW's proposed location for the construction of a purpose-built facility with hangar, classroom, and administrative space is a very level site with compacted desert soils, often called "desert pavement". Due to existing site conditions, excavation is not anticipated during site preparation and only minimal amounts of grading would be required for the relatively small (1.67 acre) lot. With implementation of the previously mentioned control measures, fugitive dust emissions would be minimal and impacts to air quality during site preparation and construction would not be significant.

Combustion Emissions

Emissions related to the Proposed Action would include combustion emissions from vehicles and heavy-duty equipment associated with construction of the 163 RW's purpose-built facility. Assuming that the construction period would last for three months (20 working days per month and 10 hours of work each day), emissions from construction equipment would be minimal. Table 4-2 provides a breakdown of calculated construction related combustion emissions by equipment and pollutant type. See Appendix B for a full list of assumptions and emission factors used in this analysis.

Table 4-2. Projected Combustion Emissions for Construction Activities

Equipment	CO (tons)	NO _x (tons)	PM ₁₀ (tons)	SO _x (tons)	ROG (tons)
Grader	0.17	0.49	0.03	0.08	0.04
Loader	0.13	0.26	0.03	0.03	0.04
Bobcat	0.08	0.15	0.02	0.00	0.03
Dozer	0.36	0.91	0.04	0.14	0.07
Paving equipment	0.13	0.29	0.02	0.04	0.04
Paver	0.13	0.27	0.02	0.05	0.04
Total	1.00	2.37	0.16	0.34	0.26

Operational Emissions

Long-term operational emissions would be generated by fuel combustion associated with 163 RW's MQ-1 LRE training operations. Operational emissions were calculated using emission factors taken from a Final Environmental Assessment (EA) for Predator inventory changes at Indian Springs Air Force Auxiliary Field, Nevada (2003) and are shown in Table 4-3. Emissions calculations for the Proposed Action represent both flying training events and LRE training events that include an airborne MQ-1 and an overhead chase plane. See Appendix B for a full list of assumptions and emission factors used in this analysis.

Table 4-3. Projected Operational Emissions

Aircraft	CO (tons/year)	NO _x (tons/year)	PM ₁₀ (tons/year)	SO _x (tons/year)	VOC (tons/year)
MQ-1	15.79	0.04	0.01	0.00	0.21
Chase Plane	12.54	0.04	0.01	0.00	0.16
Total	28.33	0.08	0.02	0.00	0.37

Emissions from both construction and operational activities are summarized in Table 4-4. The total for construction and operational emissions represents the maximum annual emissions which would occur during construction, long-term emissions would be associated with operational activities only. Implementation of the Proposed Action would result in emissions that are lower than the significance thresholds determined by the MDAQMD; therefore, implementation

Table 4-4. Summary of Emissions Associated with the Proposed Action

Source	CO (tons/year)	NO _x (tons/year)	PM ₁₀ (tons/year)	SO _x (tons/year)	ROG/VOC (tons/year)
Construction	1.00	2.37	0.16	0.34	0.26
Operations	28.33	0.08	0.02	0.00	0.37
Total	29.33	2.45	0.18	0.34	0.63
MDAQMD Threshold	100	25	15	25	24

of the Proposed Action would result in less than significant impacts to air quality and would not require a formal conformity analysis (MDAQMD 2007).

4.1.2.2 Alternative 1: New LRE at El Mirage Airport

Under this alternative, the 163 RW would implement its LRE training operations at El Mirage Airport instead of SLCA. The alternative LRE site at El Mirage Airport is similar to the site at SCLA and minimal site preparation would be required. Calculations for combustion emissions associated with construction and operations would be the same as those used for the Proposed Action. In terms of air quality impacts under Alternative 1, emissions would be less than significant.

4.1.2.3 Alternative 2: No-Action Alternative

If the No-Action Alternative were selected, the 163 RW would not implement the LRE requirement of its training mission and no new facilities would be constructed. No impacts to existing air quality conditions, as described in Section 3.1, would be anticipated from the selection of the No-Action Alternative.

4.2 NOISE

4.2.1 Approach to Analysis

Noise impact analyses typically evaluate potential changes to existing noise environments that are instigated by implementation of a Proposed Action. These potential changes may be beneficial if they reduce the number of sensitive receptors exposed to unacceptable noise levels. Conversely, changes may be significant if they result in increased exposure to unacceptable noise levels. An increase in noise levels due to introduction of a new noise source can create an impact on the surrounding environment. Noise associated with a Proposed Action is modeled and compared with existing noise to determine the magnitude of potential impacts.

According to Federal Aviation Administration (FAA) Order 1050.1E, Appendix A, Paragraph 14.3, a significant noise impact would occur if analysis shows that the Proposed Action will cause noise sensitive areas to experience an increase in noise of 1.5 decibel (dB) or more at or above 65 Day-Night Average Sound Level (DNL) noise exposure when compared to the No-Action Alternative for the same time frame. Paragraph 14.3 also explains that the 65 DNL threshold does not adequately address the effects of noise on visitors to areas within a national wildlife refuge where other noise is very low and a quiet setting is a generally recognized purpose and attribute.

DNL and Community Noise Equivalent Level (CNEL) are often used interchangeably; however, for a given set of noise measurements CNEL would typically yield a value of 1 dB greater than DNL. Also accepted by Federal agencies, CNEL is widely used within the State of California.

4.2.2 Impacts

4.2.2.1 Proposed Action

Aircraft-Related Noise

Implementation of the Proposed Action would not result in any sensitive receptors (e.g., residences, schools, etc.) currently within the baseline 65+ CNEL contour to experience an increase of 1.5 dB or greater. Also, no residences would be newly introduced into the 65+ CNEL. Thus, an increase in noise levels would not result from establishment of the proposed LRE training site at SCLA and

implementation of the Proposed Action would not have a significant impact to noise.

The INM version 7.0 noise model was used to determine noise levels associated with the proposed aircraft operations at SCLA. MQ-1 operations associated with the 163 RW's LRE training are minimal when compared to baseline operations at SCLA. Proposed operations, including overhead chase plane sorties, would have a negligible effect on the existing 65 CNEL contour, resulting in approximately 3 percent increase to the total 65 CNEL contour acreage; however, the amount of area where the 65 CNEL contour extends beyond SCLA's property boundary would not be affected. The increase in aircraft operations due to the Proposed Action would not affect any sensitive receptors or introduce any new residences to the 65 CNEL contour. Therefore, noise impacts from aircraft operations related to the Proposed Action would be less than significant.

Construction-Related Noise

Implementation of the Proposed Action would have minor, temporary effects on the noise environment in the vicinity of the proposed construction site. Use of heavy equipment for site preparation and development (e.g., vegetation removal, grading, and back fill) would generate noise exposure above typical ambient levels at SCLA. However, noise generation would be typical of construction activities, short-term, and associated impacts could be reduced through the use of equipment sound mufflers and restriction of construction activity to normal working hours (i.e., between 7:00 AM and 5:00 PM). Therefore, although adverse during construction, noise generated by construction activities associated with implementation of the Proposed Action would not significantly impact sensitive receptors adjacent to SCLA.

Operations-Related Noise

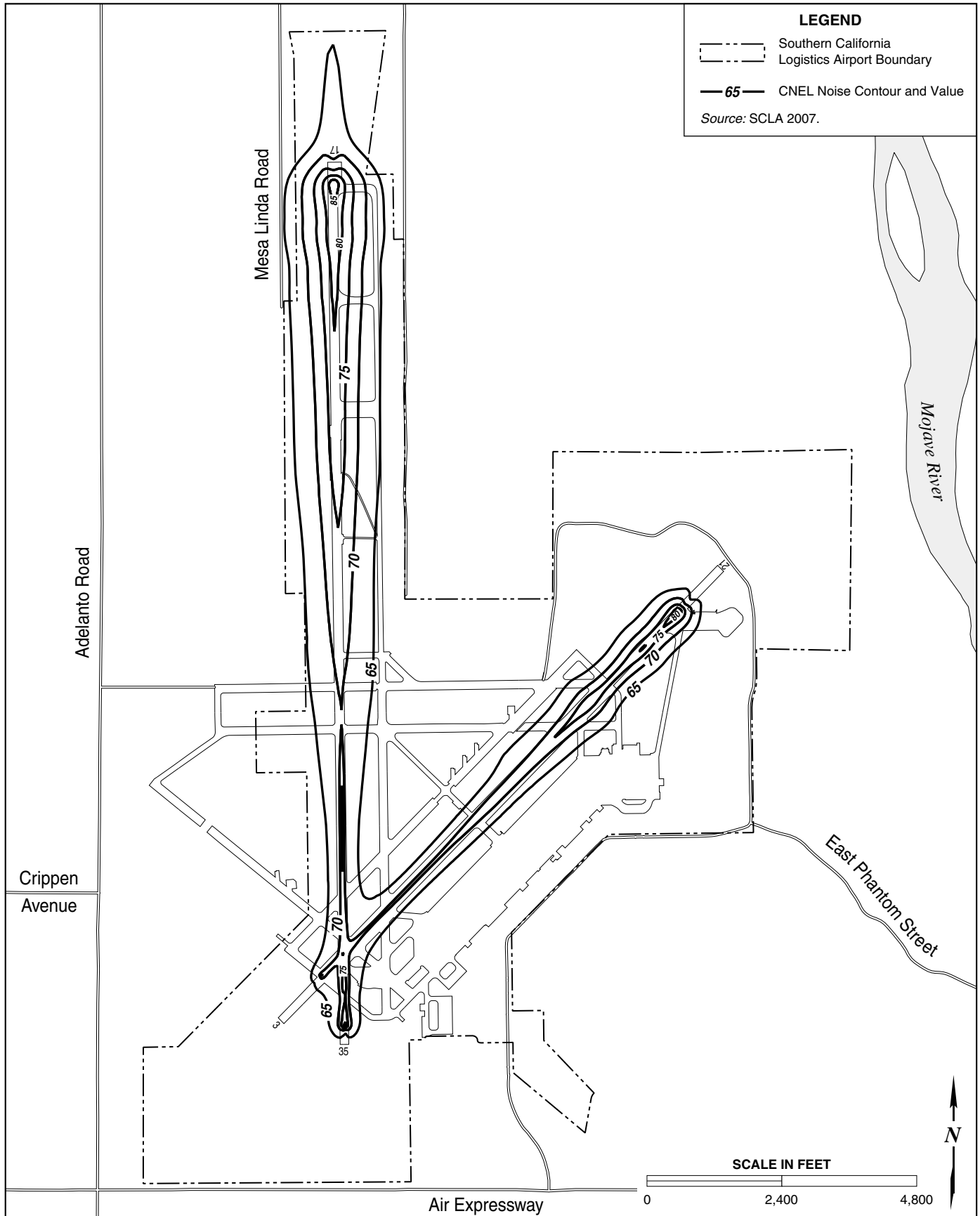
Upon completion of proposed construction, the new facility would not comprise significant noise generators. Further, the new facility would not be noise sensitive or located in an incompatible area with regard to noise exposure. Therefore, long-term, operations-related noise impacts associated with the new facility would not be significant.

4.2.2.2 Alternative 1: New LRE at El Mirage Airport

Under this alternative, the 163 RW would implement its LRE training operations at El Mirage Airport instead of SLCA. Establishment of a new LRE site at El Mirage Airport would result in an increase of approximately 3 acres of the 65 CNEL contour that extends beyond the airport's property boundary and approximately 5 acres of the 70 CNEL contour that extends beyond the airport's property boundary; however, this would not impact any sensitive noise receptors due to the remote location of the airport (see Figure 4-2). Regarding noise, impacts would be less than significant.

4.2.2.3 Alternative 2: No-Action Alternative

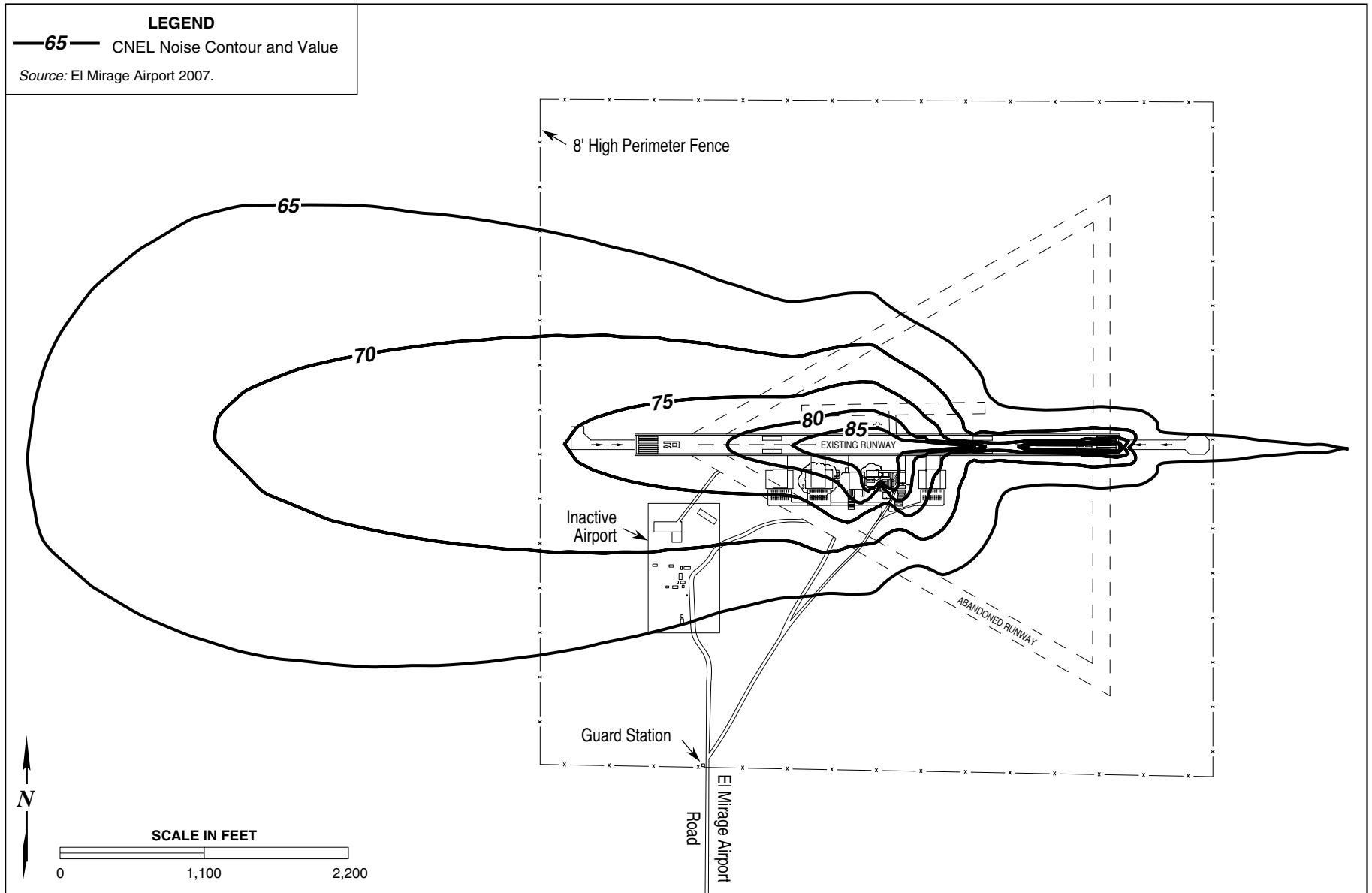
If the No-Action Alternative were selected, the 163 RW would not implement the Proposed Action. Therefore, noise would remain as described in *Section 3.2, Noise*.



EA

**Noise Contours Associated with the Proposed Action at
Southern California Logistics Airport**

**FIGURE
4-1**



EA

**Noise Contours Associated with the Proposed Action at
El Mirage Airport**

**FIGURE
4-2**

4.3 LAND USE

4.3.1 Approach to Analysis

Significance of potential land use impacts is based on the level of land use sensitivity in areas affected by a Proposed Action. In general, land use impacts would be significant if they would: 1) be inconsistent or in noncompliance with applicable land use plans or policies; 2) preclude the viability of existing land use; 3) preclude continued use or occupation of an area; 4) be incompatible with adjacent or vicinity land use to the extent that public health or safety is threatened; or 5) conflict with airfield planning criteria established to ensure the safety and protection of human life and property.

4.3.2 Impacts

4.3.2.1 Proposed Action

Implementation of the Proposed Action would not result in any impacts to land use at SCLA. The 163 RW's interim and ultimate Proposed Action sites are both located in an area designated by the SCLA Community Plan Element for Airport and Support Facilities land use. Further, the interim and ultimate Proposed Action sites are located in the Sideline Safety Zone and Traffic Pattern Safety Zone, respectively, and do not conflict with either safety zones' prohibited uses. Implementation of the Proposed Action would not result in any off-site incompatible land use from noise associated with MQ-1 flying operations.

4.3.2.2 Alternative 1: New LRE at El Mirage Airport

Under this alternative, the 163 RW would implement its LRE training operations at El Mirage Airport instead of SLCA. The new LRE site at El Mirage Airport would utilize a previously proposed hangar located in an area currently used for aircraft support and maintenance activities. With regard to land use, impacts would be less than significant.

4.3.2.3 Alternative 2: No-Action Alternative

No impacts to current land use, as described in Section 3.3, would occur from selection of the No-Action Alternative.

4.4 GEOLOGICAL RESOURCES

4.4.1 Approach to Analysis

Generally, impacts with regard to geological resources can be avoided or minimized if proper construction techniques, erosion control measures, and structural engineering designs are incorporated into project development. Analysis of potential impacts to geological resources typically includes: 1) identification and description of resources that could potentially be affected; 2) examination of the Proposed Action and the potential effects this action may have on the resource; 3) assessment of the significance of potential impacts; and 4) provision of mitigation measures in the event that potentially significant impacts are identified.

4.4.2 Impacts

4.4.2.1 Proposed Action

Potential geologic impacts associated with the Proposed Action at SCLA would be limited to ground-disturbing activities (i.e., construction). Minor impacts would result from the construction of structures. However, construction activities associated with the Proposed Action would occur on previously disturbed or developed land, which is capable of supporting such development.

Geology and Topography

No areas of shallow or exposed bedrock are present at the ultimate Proposed Action site. Additionally, both sites, interim and ultimate, are relatively level and do not present any topographical restraints.

Soils

The majority of naturally occurring soils at SCLA have been physically altered (e.g., cut, graded, or covered) to support operations and development. Implementation of fugitive dust control measures during construction, as described in Section 4.1, would limit impacts to soils that might result from construction activities. Areas where construction is proposed are not utilized for agriculture or geologic (i.e., mineral) resources and project implementation would not result in significant reduction of soil productivity.

4.4.2.2 Alternative 1: New LRE at EL Mirage Airport

Under this alternative, the 163 RW would implement its LRE training operations at El Mirage Airport instead of SLCA. Potential geologic impacts associated with this alternative would be limited to ground-disturbing activities such as construction. Minor impacts would result from the construction of structures. However, construction activities associated with this alternative would occur on previously disturbed or developed land, which is capable of supporting such development. Implementation of fugitive dust control measures during construction, as described in Section 4.1, would limit impacts to soils that might result from construction activities. Therefore, impacts to geological resources would be less than significant.

4.4.2.3 Alternative 2: No-Action Alternative

If this alternative were selected, no construction activities would be implemented and no changes to existing geological resources (as described in Section 3.4) would occur. Therefore, no impacts to geological resources would occur under implementation of the No-Action Alternative.

4.5 WATER RESOURCES

4.5.1 Approach to Analysis

Significance of potential impacts to water resources is based on water availability, quality, and use; existence of floodplains and wetlands; and associated regulations. An impact to water resources would be significant if it would: 1) reduce water availability to or interfere with the supply of existing users; 2) create or contribute to overdraft of groundwater basins or exceed safe annual yield of water supply sources; 3) adversely affect water quality or endanger public health by creating or worsening adverse health hazard conditions; 4) threaten or damage unique hydrologic characteristics; or 5) violate laws or regulations that have been established to protect or manage water resources of an area. Impacts of flood hazards on Proposed Actions would be significant if such actions are proposed to be established in areas with high probabilities of flooding.

4.5.2 Impacts

4.5.2.1 Proposed Action

Surface Water

Ground-disturbing activities associated with the Proposed Action would involve new construction. Site preparation activities (e.g., grading) and construction would result in temporary exposure and compaction of soils, affecting surface water drainage flow patterns and percolation rates. Increases in surface water runoff would result in increased sediment loading to nearby drainage channels during periods of precipitation. However, no surface Waters of the State or Waters of the U.S., including wetlands, exist in the vicinity of the interim or ultimate Proposed Action sites. During construction phases, applying Best Management Practices (BMPs) including silt fencing and suspension of construction activities during rainy periods would mitigate the effects of increased surface water runoff and sedimentation. Impacts due to construction activities would be short-term and temporary. Because the Proposed Action would result in the disturbance of more than 1 acre during construction activities, a National Pollutant Discharge Elimination System (NPDES) General Construction Stormwater Permit and a NPDES General Industrial Stormwater Permit would be required in addition to development of a Stormwater Pollution

Prevention Plan. Conformance to all Federal, state, and City requirements relating to storm water pollution prevention during construction activities would mitigate potentially adverse impacts on stormwater runoff quality. In accordance with guidance from the Lahontan Regional Water Quality Control Board, implementation of the Proposed Action would incorporate principles of Low Impact Development (LID) that would reduce surface runoff and impacts to receiving waters in the post-construction period for both the interim and ultimate Proposed Action sites. Principles of LID include maintaining natural drainage paths and landscape features to slow and filter runoff and maximize groundwater recharge, reducing the impervious cover created by development, and managing runoff as close to the source as possible. Once operational, no impacts to surface water would occur. Therefore, impacts to surface water associated with the Proposed Action would be less than significant.

Groundwater

New construction associated with the Proposed Action would slightly reduce surface areas available for groundwater recharge. While the proposed site of the purpose-built facility is in an area of predominantly developed land, the Proposed Action would add new impermeable surfaces to areas of “desert pavement” soils currently available for groundwater recharge. However, the reduction in surface area for groundwater recharge and resultant increase in stormwater discharge would be negligible. Further, no new wells would be constructed at SCLA. Therefore, implementation of the Proposed Action would have a less than significant impact on groundwater resources.

Floodplains

The Proposed Action area is located well outside of the 100- and 500-year floodplains (Federal Emergency Management Agency 1996). Additionally, proposed development would occur in areas occupied by existing development and therefore would not alter the existing hydrologic regime at the site such that increased downstream flood hazards would be created. Therefore, the Proposed Action would have no impacts with regards to floodplains.

4.5.2.2 Alternative 1: New LRE at El Mirage Airport

Under this alternative, the 163 RW would implement its LRE training operations at El Mirage Airport instead of SLCA. Site-specific information about water

resources at and in the immediate vicinity of El Mirage Airport has not yet been provided. In the event that El Mirage Airport was selected as the location for the LRE site and training facilities, a site-specific water resources study would need to be conducted to adequately describe existing environmental conditions and fully evaluate impacts to water resources at the airport and within its vicinity. Therefore, impacts to water resources can not be evaluated at this time.

4.5.2.3 Alternative 2: No-Action Alternative

If the No-Action Alternative were selected, proposed construction would not be implemented and water resource conditions would remain unchanged from their current status, as described in Section 3.5, *Water Resources*. Therefore, selection of the No-Action Alternative would not impact regional or local water resources.

4.6 BIOLOGICAL RESOURCES

4.6.1 Approach to Analysis

Determination of the significance of potential impacts to biological resources is based on 1) the importance (i.e., legal, commercial, recreational, ecological, or scientific) of the resource; 2) the proportion of the resource that would be affected relative to its occurrence in the region; 3) the sensitivity of the resource to proposed activities; and 4) the duration of ecological ramifications. Impacts to biological resources are significant if species or habitats of concern are adversely affected over relatively large areas or disturbances cause reductions in population size or distribution.

4.6.2 Impacts

4.6.2.1 Proposed Action

Habitat-disturbing activities associated with the Proposed Action would include new construction. In November 2005 and January 2006 SCLA was surveyed for sensitive species which included focused desert tortoise and Burrowing Owl surveys. No sensitive biological resources were observed (SCLA 2006). Due to the lack of sensitive or native plant species and disturbed nature of existing vegetation conditions at both the interim and ultimate project sites, proposed construction would have less than significant impacts on vegetation or the habitat it may provide.

4.6.2.2 Alternative 1: New LRE at El Mirage Airport

Under this alternative, the 163 RW would implement its LRE training operations at El Mirage Airport instead of SLCA. Site-specific information about biological resources at and in the immediate vicinity of El Mirage Airport has not yet been provided. In the event that El Mirage Airport was selected as the location for the LRE site and training facilities, a site-specific biological resource study would need to be conducted to adequately describe existing environmental conditions and fully evaluate impacts to biological resources at the airport and in its vicinity. Therefore, impacts to biological resources can not be evaluated at this time.

4.6.2.3 Alternative 2: No-Action Alternative

Under the No-Action Alternative, no construction projects would be implemented. Consequently, no impacts would occur and existing conditions of vegetation, wildlife, and wetlands would remain as described in Section 3.6, *Biological Resources*.

4.7 TRANSPORTATION AND CIRCULATION

4.7.1 Approach to Analysis

Potential impacts to transportation and circulation are assessed with respect to anticipated disruption or improvement of current transportation patterns and systems; deterioration or improvement of existing levels of service; and changes in existing levels of transportation safety. Impacts (beneficial or adverse) may arise from physical changes to circulation (e.g., closing, rerouting, or creating roads), construction activity, introduction of construction-related traffic on local roads, or changes in daily or peak-hour traffic volumes created by installation workforce and population changes. Adverse impacts on roadway capacities would be significant if roads with no history of exceeding capacity were forced to operate at or above their full design capacity.

4.7.2 Impacts

4.7.2.1 Proposed Action

Construction-Related Impacts

Implementation of the Proposed Action would require delivery of materials to the ultimate Proposed Action site. However, construction traffic would make up only a small portion of the total existing traffic volume in the region and at SCLA, and many of the vehicles would be driven to and kept on site for the duration of construction, resulting in very few actual increased trips. Further, increases in traffic volumes associated with construction activity would be temporary; upon completion of construction, no long-term impacts to off-site transportation systems would result. Therefore, proposed construction projects would result in less than significant, temporary impacts on traffic circulation due to increased traffic associated with construction vehicles.

Operation-Related Impacts

Under the Proposed Action, no changes to the transportation network at SCLA would be made. It is anticipated that all operations, maintenance, and support personnel would be shuttled from March ARB to the LRE site on a daily basis throughout the year in support of flying training. In addition, for approximately 2 weeks each quarter comprising 8 weeks total throughout the year, instructors and students would also be shuttled from March ARB to SCLA for LRE training

on a daily basis. All shuttle vehicle parking would be easily accommodated at both the interim and ultimate Proposed Action site. Therefore, impacts to transportation would be less than significant.

4.7.2.2 Alternative 1: New LRE at El Mirage Airport

Under this alternative, the 163 RW would implement its flying and LRE training operations at El Mirage Airport instead of SLCA. As with the Proposed Action, no changes to the transportation network at El Mirage Airport would be made. It is anticipated that all operations, maintenance, and support personnel would be shuttled from March ARB to the LRE site on a daily basis throughout the year in support of flying training. In addition, for approximately 2 weeks each quarter comprising 8 weeks total throughout the year, instructors and students would also be shuttled from March ARB to El Mirage Airport for LRE training on a daily basis. All shuttle vehicle parking would be easily accommodated at El Mirage Airport by existing facilities. Therefore, impacts to transportation would be less than significant.

4.7.2.3 Alternative 2: No-Action Alternative

If the No-Action Alternative were selected, the 163 RW would not implement facilities construction. No impacts to the current regional or on-site transportation and circulation system, as described in Section 3.7, would result from the No-Action Alternative.

4.8 VISUAL RESOURCES

4.8.1 Approach to Analysis

Determination of the significance of impacts to visual resources is based on the level of visual sensitivity in the area. Visual sensitivity is defined as the degree of public interest in a visual resource and concern over adverse changes in the quality of that resource. In general, an impact to a visual resource is significant if implementation of the Proposed Action would result in substantial alteration to an existing sensitive visual setting.

4.8.2 Impacts

4.8.2.1 Proposed Action

Facilities construction projects associated with the Proposed Action would be visually consistent with existing structures at the airport. SCLA is a relatively low sensitivity visual environment, primarily because only a few areas of SCLA can be viewed from off-property; therefore, impacts to regional visual resources would be less than significant upon implementation of the Proposed Action.

4.8.2.2 Alternative 1: New LRE at El Mirage Airport

Under this alternative, the 163 RW would implement its LRE training operations at El Mirage Airport instead of SLCA. Due in part to the remote nature of the facilities, El Mirage Airport and the surrounding area has generally low visual sensitivity. Visual impacts would be therefore be less than significant.

4.8.2.3 Alternative 2: No-Action Alternative

If the No-Action Alternative were selected, none of the proposed construction would occur. Therefore, visual conditions would remain as described in Section 3.8, *Visual Resources*.

4.9 CULTURAL RESOURCES

4.9.1 Approach to Analysis

Cultural resources are subject to review under both Federal and state laws and regulations. Section 106 of the National Historic Preservation Act of 1966 empowers the Advisory Council on Historic Preservation to comment on federally initiated, licensed, or permitted projects affecting cultural sites listed or eligible for inclusion on the National Register of Historic Places (NRHP).

Once cultural resources have been identified, significance evaluation is the process by which resources are assessed relative to significance criteria for scientific or historic research, for the general public, and for traditional cultural groups. Only cultural resources determined to be significant (i.e., eligible for the NRHP) are protected under the National Historic Preservation Act.

Analysis of potential impacts to cultural resources considers both direct and indirect impacts. Direct impacts may occur by 1) physically altering, damaging, or destroying all or part of a resource; 2) altering the characteristics of the surrounding environment that contribute to resource significance; 3) introducing visual, audible, or atmospheric elements that are out of character with the property or alter its setting; or 4) neglecting the resource to the extent that it is deteriorated or destroyed.

Direct impacts can be assessed by identifying the types and locations of Proposed Actions and determining the exact locations of cultural resources that could be affected. Indirect impacts primarily result from the effects of project-induced population increases and the resultant need to develop new housing areas, utilities services, and other support functions necessary to accommodate population growth. These activities and facilities' subsequent use can disturb or destroy cultural resources.

4.9.2 Impacts

4.9.2.1 Proposed Action

No archaeological sites eligible for the NRHP have been identified at SCLA. The SHPO, in their letter dated 16 January 2008, concurred with these findings (Appendix A). No existing buildings are proposed for demolition and no historic properties at SCLA would be affected by the Proposed Action.

Although the interim and ultimate proposed construction sites have been heavily disturbed during establishment and subsequent development and use of the installation, the potential exists – however slight – for currently buried remains to be uncovered during ground-disturbing activities (i.e., construction). If such resources were uncovered during development at any of the proposed project locations, activities would be suspended in the immediate location of the discovery until a qualified archaeologist could determine the significance of the resource(s).

There are no known federally recognized Native American lands or resources at SCLA and consultation with all relevant Native American groups conducted as part of the interagency consultation process has determined that no area of interest to Native Americans exists within SCLA or its immediate vicinity (Appendix A). If Native American lands or resources are determined to be present near any of the proposed project locations, activities would be suspended until a qualified archaeologist and Native American representative could determine the significance of the resource(s). Therefore, impacts with regard to cultural resources would be less than significant.

4.9.2.2 Alternative 1: New LRE at El Mirage Airport

Under this alternative, the 163 RW would implement its LRE training operations at El Mirage Airport instead of SLCA. Site-specific information regarding cultural resources at El Mirage Airport has not yet been provided. In the event that El Mirage Airport was selected as the location for the LRE site and training facilities, a site-specific cultural resources study would need to be conducted to adequately describe existing resources and fully evaluate impacts to cultural resources at the airport and in its vicinity. Therefore, impacts to cultural resources can not be evaluated at this time.

4.9.2.3 Alternative 2: No-Action Alternative

Cultural resources, as described in *Section 3.9*, would not be impacted if the No-Action Alternative were selected. Therefore, no significant impacts to cultural resources would occur under implementation of the No-Action Alternative.

4.10 SOCIOECONOMICS

4.10.1 Approach to Analysis

Significance of population and expenditure impacts are assessed in terms of their direct effects on the local economy and related effects on other socioeconomic resources (e.g., housing). The magnitude of potential impacts varies depending on the location of a Proposed Action; for example, an action that creates 20 employment positions may be unnoticed in an urban area but may have significant impacts in a more rural region. If potential socioeconomic impacts would result in substantial shifts in population trends, or adversely affect regional spending and earning patterns, they would be significant.

4.10.2 Impacts

4.10.2.1 Proposed Action

Economic activity associated with the proposed construction activities, such as hiring of temporary laborers and purchasing of materials for construction, would provide short-term economic benefits to the local economy. However, these short-term beneficial impacts would be negligible on a regional scale. No long-term changes in economic activity associated with the 163 RW or SCLA would occur upon implementation of the Proposed Action (e.g., there would be no changes in unit staffing levels). Therefore, implementation of the Proposed Action would not result in a significant impact to regional or local socioeconomic characteristics.

4.10.2.2 Alternative 1: New LRE at El Mirage Airport

Under this alternative, short-term beneficial impacts to the local economy would occur as a result of construction-related employment and purchasing; similar to the Proposed Action, these benefits would be negligible on a regional scale. No long-term socioeconomic impacts would occur and socioeconomic impacts associated with this alternative would not be significant.

4.10.2.3 Alternative 2: No-Action Alternative

If the No-Action Alternative were selected, no change to regional socioeconomic characteristics would occur and socioeconomic conditions would remain as described in Section 3.10.

4.11 ENVIRONMENTAL JUSTICE AND PROTECTION OF CHILDREN

4.11.1 Approach to Analysis

In order to comply with Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*, ethnicity and poverty status in the vicinity of the 163 RW have been examined and compared to city, regional, state, and national data to determine if any minority or low-income communities could potentially be disproportionately affected by implementation of the Proposed Action or alternatives. Similarly, to comply with Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, the distribution of children and locations where numbers of children may be proportionally high on and in the vicinity of the 163 RW was determined to ensure that environmental risks and safety risks to children are addressed.

4.11.2 Impacts

4.11.2.1 Proposed Action

The communities near SCLA (City of Adelanto and City of Victorville) have a higher percentage of residents living under the poverty level than County, State, or national levels. Further, the percentage of minority residents in the City of Adelanto is the highest among the five geographic areas examined for this analysis. However, since no significant, adverse environmental impacts associated with the Proposed Action would occur, no populations (minority, low-income, or otherwise) would be disproportionately adversely impacted and no significant impact with regard to environmental justice would result.

Implementation of the Proposed Action would not result in increased environmental health risks or in safety risks. Further, no on-site housing or facilities for children exist in or adjacent to areas associated with the 163 RW's interim or ultimate proposed LRE sites. Therefore, implementation of the Proposed Action would not result in increased or disproportionate environmental health risks or safety risks to children.

4.11.2.2 Alternative 1: New LRE at El Mirage Airport

The City of Adelanto, in which the El Mirage Airport is located, has the highest percentage of low-income and minority residents among the five geographic

areas examined for this analysis. However, since no significant adverse impacts have been identified associated with the implementation of the 163 RW's LRE site at the airport, disproportionate impacts to low-income and minority residents would not occur. Therefore, no significant impacts with regard to environmental justice would occur.

Implementation of this alternative would not result in increased environmental health risks or in safety risks. Further, no on-site housing or facilities for children exist in areas associated with the 163 RW's alternative LRE site. Therefore, implementation of the Proposed Action would not result in increased or disproportionate environmental health risks or safety risks to children.

4.11.2.3 Alternative 3: No-Action Alternative

If the No-Action Alternative were selected, the 163 RW would not implement the Proposed Action. No impacts to existing conditions, as described in Section 3.12, would result from the selection of the No-Action Alternative. No significant impacts to children or minority or low-income populations would occur.

4.12 HAZARDOUS MATERIALS AND WASTES

4.12.1 Approach to Analysis

Numerous local, state, and Federal laws regulate the storage, handling, disposal, and transportation of hazardous materials and wastes; the primary purpose of these laws is to protect public health and the environment. The significance of potential impacts associated with hazardous substances is based on their toxicity, ignitability, and corrosivity. Impacts associated with hazardous materials and wastes would be significant if the storage, use, transportation, or disposal of hazardous substances substantially increases the human health risk or environmental exposure.

4.12.2 Impacts

4.12.2.1 Proposed Action

Upon implementation of the Proposed Action, the 163 RW would ultimately construct a purpose-built facility that meets requirements for hangar, classroom, and administrative space. For both interim and ultimate facilities proposed at SCLA, implementation of the Proposed Action would increase the storage of aircraft fuels on site; however, the fuel storage and refueling systems would be constructed according to all current regulations regarding hazardous materials storage and secondary containment and SCLA is already listed as a Large Quantity Generator (LQG) of hazardous waste. In addition to fuels, a temporary increase in the storage of hazardous materials and waste would occur throughout the construction phases of the project. Hazardous materials associated with construction activities would also be used according to all current regulations regarding storage and secondary containment. Hazardous waste would be disposed of in accordance with existing hazardous waste management plans, permits, policies, and procedures. Therefore, impacts would be less than significant.

4.12.2.2 Alternative 1: New LRE at El Mirage Airport

Under this alternative, the 163 RW would implement its LRE training operations at El Mirage Airport instead of SLCA. Establishment of a LRE training site for UAVs at El Mirage would involve additional storage of aircraft fuel in the long term and storage of hazardous material and wastes associated with construction

in the short term. This increase would not be expected to cause the facility to be classified as a LQG of hazardous waste. All hazardous materials and wastes would be stored and disposed of in accordance with all current regulations regarding storage and secondary containment and applicable management plans, policies, and procedures. Consequently, impacts would be less than significant under this alternative.

4.12.2.3 Alternative 2: No-Action Alternative

No significant impacts to hazardous materials and wastes would result from implementation of the No-Action Alternative and conditions would remain as described in Section 3.12.

4.13 SAFETY

4.13.1 Approach to Analysis

If implementation of the Proposed Action would substantially increase risks associated with aircraft mishap potential or flight safety relevant to the public or the environment, it would represent a significant impact. For example, if an action involved an increase in aircraft operations such that mishap potential would increase significantly, air safety would be compromised and impacts would be significant.

Further, if implementation of the Proposed Action would result in incompatible land use with regard to safety criteria such as Runway Protection Zones (RPZs) and Clear Zones, impacts would be significant.

4.13.2 Impacts

4.13.2.1 Proposed Action

Mishap Potential and Bird-Aircraft Strike Hazard

Historical mishap and Bird-Aircraft Strike Hazard (BASH) data relevant to the SCLA is not available at this time; however, bird-aircraft strikes present a potential threat to 163 RW aircraft due to SCLA's location beneath the Pacific Flyway (see figure 3-14). Therefore, impacts regarding aircraft mishaps and bird-aircraft strikes can not be evaluated at this time.

Safety Zones

Neither the interim nor ultimate facilities proposed by the 163 RW present an incompatible land use with regard to established safety zones at SCLA. The Proposed Action would not result in a change in shape or shift in location of established safety zones and no new facilities would be constructed within established RPZs. Therefore, no land use conflict with regard to airfield safety would result from implementation of the Proposed Action.

4.13.2.2 Alternative 1: New LRE at El Mirage Airport

Under this alternative, the 163 RW would implement its LRE training operations at El Mirage Airport instead of SLCA. Site-specific information about safety zones, aircraft mishaps, and BASH data at El Mirage Airport has not yet been

provided. AMEC is continuing to seek these data and will incorporate them as they become available. Therefore, impacts regarding safety at El Mirage Airport can not be evaluated at this time.

4.13.2.3 Alternative 2: No-Action Alternative

If the No-Action Alternative were selected, the 163 RW would not implement facilities construction or LRE training. No impacts to current safety conditions, as described in Section 3.13, would result from the No-Action Alternative.

4.14 AIRSPACE MANAGEMENT

4.14.1 Approach to Analysis

The significance of potential impacts to airspace management depends on the degree to which the proposed mission change would affect the airspace environment. Significant impacts could result if the Proposed Action would: 1) impose major restrictions on air commerce opportunities; 2) significantly limit airspace access to a large number of users; or 3) require modifications to air traffic control (ATC) systems.

4.14.2 Impacts

4.14.2.1 Proposed Action

Implementation of the 163 RW's mission would result in an increase in the number of operations at both SCLA and in Restricted Airspaces R-2512 and R-2502. In 2006, aircraft operations at SCLA totaled more than 60,000 and were all handled by SCLA's Air Traffic Control Tower (ATCT) (SCLA 2007). Runway 21 would be utilized during LRE training at SCLA and operations in the airspace would consist of closed patterns northwest of the runway. Closed pattern tracks would make a 0.5 mile radius right turn approximately one third of the way down Runway 21 into a 1 mile downwind leg, followed by another 0.5 mile radius right turn to return to Runway 21. SCLA's ATCT would ensure adequate spacing with inbound and overhead aircraft in the airspace. Operations associated with the Proposed Action (approximately 5,120 operations per year) would represent a small increase (8.5 percent) over the existing conditions and no changes to airspace configuration or management procedures would be required. Therefore, increased operations associated with the Proposed Action would not have a significant impact to airspace management.

4.14.2.2 Alternative 1: New LRE at El Mirage Airport

Under this alternative, the 163 RW would implement its LRE training operations at El Mirage Airport instead of SCLA. Site-specific information about airspace management at El Mirage Airport has not yet been provided. AMEC is continuing to seek these data and will incorporate them as they become available. Impacts regarding airspace management at El Mirage Airport cannot be fully evaluated at this time. However, due to the relatively small number and

infrequency of LRE training operations, impacts to airspace management are expected to be less than significant.

4.14.2.3 Alternative 2: No-Action Alternative

If the No-Action Alternative were selected, the 163 RW would not implement the Proposed Action. Therefore, conditions would remain as described in *Section 3.14, Airspace Management* and no impacts to airspace management would occur.

SECTION 5

CUMULATIVE IMPACTS

Cumulative impacts on environmental resources result from incremental impacts of the Proposed Action (preferred alternative) when combined with other past, present, and reasonably foreseeable future projects in an affected area. Cumulative impacts can result from minor, but collectively substantial, actions undertaken over a period of time by various agencies (Federal, state, or local) or persons. In accordance with the National Environmental Policy Act (NEPA), a discussion of cumulative impacts resulting from projects that are proposed, under construction, recently completed, or anticipated to be implemented in the near future is required.

Southern California Logistics Airport (SCLA) plans to increase overall aircraft operations and activity in the long-term. The 20-year long range plan is expected to result in approximately 266,300 operations per year, an increase of approximately 200,000 over current operations. In support of increased operations, SCLA's master plan development concept indicates plans to extend and modify runways, taxiways, and roadways, in addition to plans for new facilities (see Figure 5-1). Major components of this master plan concept include extending Runway 03/21 by 862 feet for a total length of 10,000 feet. The master plan also indicates the development of two full-length parallel taxiways; one to the west of Runway 17/35 and the other to the north of Runway 03/21. In addition to the parallel taxiways, several connecting taxiways are also planned (SCLA 2007). Except for proposed modifications to nearby roadways, all planned components of the master plan concept are located within SCLA's current boundary.

The time frame associated with SCLA's projected operations increases and development of master plan concept components is approximately 20 years and the 163^d Reconnaissance Wing's Proposed Action includes a relatively small number of aircraft operations and short-term construction. Additionally, the projected increase in civilian aircraft operations would not be expected to impact the Proposed Action (SCLA 2007). Therefore, implementation of the Proposed Action at SCLA would have no significant cumulative impacts.

SECTION 6

SUMMARY OF FINDINGS

A summary of environmental impacts anticipated to result from implementation of the Proposed Action of 163^d Reconnaissance Wing (163 RW) of the California Air National Guard (ANG) at Southern California Logistics Airport (SCLA) are evaluated in this section.

Air Quality. Under implementation of the Proposed Action, fugitive dust would be generated from construction activities including grading. In accordance with Mojave Desert Air Quality Management District (MDAQMD) guidelines, implementation of control measures would be required during construction activities associated with the Proposed Action and these measures would reduce impacts to less than significant levels. Similarly, combustion emissions from vehicles used during construction are considered less than significant based on MDAQMD thresholds. Once operational, air emissions would occur from fuel combustion related MQ-1 aircraft operations. Operational emissions were calculated to be below significance thresholds set by the MDAQMD. Implementation of the Proposed Action would have less than significant impacts to air quality

Noise. MQ-1 operations associated with the Proposed Action would result in a negligible increase of the 65 CNEL contour acreage by less than one percent. Additionally, the increase in aircraft operations due to the Proposed Action would not affect any sensitive receptors or introduce any new residences to the 65 CNEL contour. Therefore, noise impacts from aircraft operations related to the Proposed Action would be less than significant. Proposed construction activities would generate noise exposure above typical ambient levels at the installation; however, noise generation would be short-term and would be reduced through the use of equipment sound mufflers and restriction of construction activity to normal working hours (i.e., between 7:00 AM and 5:00 PM). Since none of the new facilities would comprise significant noise generators, be noise sensitive, or be located in an incompatible noise exposure area, long-term operations-related noise impacts would not be significant. Therefore, noise impacts would be less than significant.

Land Use. Implementation of the Proposed Action would not result in any impacts to land use at SCLA. The 163 RW's interim and ultimate Proposed

Action sites are both located in an area designated by the SCLA Community Plan Element for Airport and Support Facilities land use. Further, the interim and ultimate Proposed Action sites are located in the Sideline Safety Zone and Traffic Pattern Safety Zone, respectively, and do not conflict with either safety zones' prohibited uses. Implementation of the Proposed Action would not result in any off-site incompatible land use from noise associated with MQ-1 flying operations.

Geological Resources. Potential geologic impacts associated with the Proposed Action at SCLA would be limited to ground-disturbing activities (i.e., construction). Minor impacts would result from the construction of structures. However, construction activities associated with the Proposed Action would occur on previously disturbed or developed land, which is capable of supporting such development. No areas of shallow or exposed bedrock are present at the ultimate Proposed Action site. Additionally, both sites, interim and ultimate, are relatively level and do not present any topographical restraints. Implementation of fugitive dust control measures during construction, as described in Section 4.1, would limit impacts to soils that might result from construction activities. Therefore, impacts to geological resources would be less than significant.

Water Resources. Ground-disturbing activities associated with the Proposed Action would include new construction. Site preparation activities (e.g., grading) and construction would result in temporary exposure and compaction of soils, affecting surface water drainage flow patterns and percolation rates. During construction phases, applying Best Management Practices such as silt fencing and suspension of construction during rainy periods would mitigate the effects of increased surface water runoff and sedimentation. Because the Proposed Action would result in the disturbance of more than 1 acre during construction activities, a National Pollutant Discharge Elimination System (NPDES) General Construction Stormwater Permit and a NPDES General Industrial Stormwater Permit would be required in addition to development of a Stormwater Pollution Prevention Plan. Conformance to all Federal, state, and City requirements relating to storm water pollution prevention during construction activities would mitigate potentially adverse impacts on stormwater runoff quality. In accordance with guidance from the Lahontan Regional Water Quality Control Board, implementation of the Proposed Action would incorporate principles of Low Impact Development that would reduce surface

runoff and impacts to receiving waters in the post-construction period for both the interim and ultimate Proposed Action sites. Once operational no impacts to surface water would occur. New construction and paving associated with the Proposed Action would slightly reduce surface areas available for groundwater recharge. However, the reduction in surface area and resultant increase in stormwater drainage would be negligible. In addition, no construction or facilities modification projects would occur within the 100-year floodplain. Therefore, the Proposed Action would not have an adverse impact on water resources.

Biological Resources. Habitat-disturbing activities associated with the Proposed Action would include new construction. Due to the lack of sensitive species or native plant species and the disturbed nature of existing vegetation conditions at both the interim and ultimate project sites, proposed construction would have less than significant impacts on vegetation or the habitat it may provide.

Transportation and Circulation. Proposed construction projects would result in minor, temporary impacts on SCLA's traffic circulation due to increased traffic associated with construction vehicles and temporary detours resulting from road closures. However, these short-term temporary impacts would not have a significant impact on SCLA's transportation network. Due to the periodic nature of the 163 RW's mission at SCLA, impacts are not anticipated to be significant and any adverse effects to transportation would be temporary.

Visual Resources. Construction projects associated with the Proposed Action would be visually consistent with existing structures at the airport. SCLA is a relatively low sensitivity visual environment, primarily because only a few areas of SCLA can be viewed from off-property; therefore, impacts to regional visual resources would be less than significant upon implementation of the Proposed Action.

Cultural Resources. No National Register of Historic Places-listed or eligible archaeological resources have been recorded at the installation. The State Historic Preservation Office (SHPO) has previously concurred with these findings for other projects at SCLA; however, consultation with SHPO was conducted and documented as part of this Environmental Assessment (EA) which also reaffirmed these findings. Although the proposed construction sites have been heavily disturbed during establishment and subsequent development

and use of SCLA, the potential exists – however slight – for currently buried remains to be uncovered during ground-disturbing activities (i.e., construction). If such resources were uncovered during development at any of the proposed project locations, activities would be suspended in the immediate location of the discovery until a qualified archaeologist could determine the significance of the resource(s). Further, there are no known federally-recognized Native American lands or resources at SCLA. Consultation with all relevant Native American groups has been conducted as part of the interagency consultation process for previous projects at SCLA; however consultation with all relevant Native American groups will be conducted and documented as part of this EA. If Native American lands or resources are determined to be present near any of the proposed project locations, activities would be suspended until a qualified archaeologist and Native American representatives could determine the significance of the resource(s). Therefore, impacts with regard to cultural resources would be less than significant.

Socioeconomics. Economic activity associated with the proposed construction activities, such as hiring of temporary laborers and purchasing of materials for construction, would provide short-term economic benefits to the local economy. However, these short-term beneficial impacts would be negligible on a regional scale. No long-term changes in economic activity associated with the 163 RW or SCLA would occur upon implementation of the Proposed Action (e.g., there would be no changes in unit staffing levels). Therefore, implementation of the Proposed Action would not result in a significant impact to regional or local socioeconomic characteristics.

Environmental Justice and Protection of Children. The communities near SCLA (City of Adelanto and City of Victorville) have a higher percentage of residents living under the poverty level than county, state, or national levels. Further, the percentage of minority residents in the City of Adelanto is the highest among the five geographic areas examined for this analysis. However, since no significant, adverse environmental impacts associated with the Proposed Action would occur, no populations (minority, low-income, or otherwise) would be disproportionately adversely impacted and no significant impact with regard to environmental justice would result. Implementation of the Proposed Action would not result in increased environmental health risks or in safety risks. Further, no on-site housing or facilities for children exist in or

adjacent to areas associated with the 163 RW's interim or ultimate proposed LRE sites. Therefore, implementation of the Proposed Action would not result in increased or disproportionate environmental health risks or safety risks to children.

Hazardous Materials and Wastes. Upon implementation of the Proposed Action, the 163 RW would ultimately construct a purpose-built facility that meets requirements for hangar, classroom, and administrative space. For both interim and ultimate facilities proposed at SCLA, implementation of the Proposed Action would increase the storage of aircraft fuels on site; however, the fuel storage and refueling systems would be constructed according to all current regulations regarding hazardous materials storage and secondary containment. In addition to fuels, a temporary increase in the storage of hazardous materials and waste would occur throughout the construction phases of the project. Hazardous materials associated with construction activities would also be used according to all current regulations regarding storage and secondary containment. Hazardous waste would be disposed of in accordance with existing hazardous waste management plans, permits, policies, and procedures. Therefore, impacts would be less than significant.

Safety. Historical mishap and Bird-Aircraft Strike Hazard (BASH) data relevant to the SCLA is not available at this time; however, bird-aircraft strikes present a potential threat to 163 RW aircraft due to SCLA's location beneath the Pacific Flyway (see figure 3-14). Therefore, impacts regarding aircraft mishaps and bird-aircraft strikes can not be evaluated at this time. Neither the interim nor ultimate facilities proposed by the 163 RW present an incompatible land use with regard to established safety zones at SCLA. The Proposed Action would not result in a change in shape or shift in location of established safety zones and no new facilities would be constructed within established RPZs. Therefore, no land use conflict with regard to airfield safety would result from implementation of the Proposed Action.

Airspace Management. Implementation of the 163 RW's mission would result in an increase in the number of operations in SCLA's airspace. In 2006, total aircraft operations at SCLA were over 60,000 and were all handled by SCLA's Air Traffic Control Tower. Operations associated with the Proposed Action would represent a relatively small increase (8.5 percent) over the existing conditions and

no changes to airspace configuration or management procedures would be required. Therefore, increased operations associated with the Proposed Action would not have a significant impact to airspace management.

SECTION 7

SPECIAL PROCEDURES

Impact evaluations conducted during preparation of this Environmental Assessment (EA) have determined that no significant environmental impacts would result from implementation of the Proposed Action at Southern California Logistics Airport. This determination is based on a thorough review and analysis of existing resource information, the application of accepted modeling methodologies, and coordination with knowledgeable, responsible personnel from the 163^d Reconnaissance Wing and relevant local, state, and Federal agencies. Further, in addition to following control measures for reducing fugitive dust emissions, applying Best Management Practices such as silt fencing and suspension of construction during rainy periods, and conforming to all Federal, state, and city requirements relating to storm water pollution prevention during construction activities, no special procedures are required prior to implementation of the proposed action.

SECTION 8

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SECTION 9

LIST OF PREPARERS

This report was prepared for, and under the direction of, the Air National Guard by AMEC Earth and Environmental, Inc. Members of the professional staff are listed below:

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B.A. Environmental Studies

Technical Analysts

Andrew Chen
B.A. Environmental Studies- Conservation Biology

Brian Cook
B.S. Biology

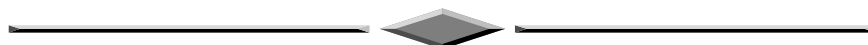
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M.E.S.M. Environmental Science & Management

Leanna Struzziery
M.E.S.M. Environmental Science & Management

Production

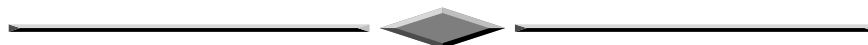
Janice Depew
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Deirdre Stites
Graphic Artist



APPENDIX A

IICEP DISTRIBUTION LIST



APPENDIX A
IICEP DISTRIBUTION LIST

Karen Vitulano
U.S. EPA – Environmental Review
Office
75 Hawthorne Street
San Francisco, CA 94105
(415) 947-4178

U.S. Fish and Wildlife Service
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road
Carlsbad, CA 92011
(760) 431-9440

Shannon Pankratz
U.S. Army Corps of Engineers
Los Angeles District Planning Division
915 Wilshire Blvd., Suite 980
Los Angeles, CA 90017
(213) 452-3908

Terry Roberts
State of California Clearinghouse
Governors Office
1400 Tenth Street, Room 100
Sacramento, CA 95814
(916) 445-0613

Milford Wayne Donaldson
State Historic Preservation Officer
1416 9th Street, Rm 1442-7
Sacramento, CA 95814
(916) 653-6624

Mojave Desert Air Quality
Management District
14306 Park Avenue
Victorville, CA 92392
(760) 245-1661

Deborah Robinson Barmack
San Bernardino Associated Governments
107 West 3rd Street, 2nd Floor
San Bernardino, CA 92410-1715
(909) 884-8276

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City of Victorville Planning Department
14343 Civic Drive
Victorville, CA 92393-5001
(760) 955-5135

Rick Gomez
City of Adelanto
Development Department
11600 Air Expressway
Adelanto, CA 92301
(760) 246-2300

Billie Woody
Victorville Public Library
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Victorville, CA 92395
(760) 245-4222

Peter Soderquist
Southern California Logistics Airport
Airport Director
18374 Phantom Road
Victorville, CA 92324
(760) 243-1900

Richard McRae
El Mirage Test Flight Facility
73 El Mirage Airport Road, Suite B
Adelanto, CA 92301
(760) 388-8102

Cahuilla Band of Indians
Anthony Madrigal, Jr, Interim
Chairperson
P.O. Box 391760
Anza, CA 92539
951.763.2631

Chemehuevi Reservation
Charles Wood, Chairperson
P.O. Box 1976
Chemehuevi Valley, CA 92363
760.858.4301

Fort Mojave Reservation
Tim Williams, Chairperson
500 Merriman Ave.
Needles, CA 92363
760.629.5761

Ramona Band of Cahuilla
Joseph Hamilton, Tribal Chairman
P.O. Box 391670
Anza, CA 92539
915.763.4105

San Manuel Band of Mission Indians
Henry Duro, Chairperson
26569 Community Center Drive
Highland, CA 92346
909.864.8933

cc San Manuel Band of Mission
Indians
Ann Brierty, Environmental
Department
101 Pure Water Lane
Highland, CA 92346
909.863.5899 x 4321

Morongo Band of Mission Indians
Britt W. Wilson, Cultural Resources –
Project Manager
49750 Seminole, Drive
Cabazon, CA 92230
951.755.5206

NATIVE AMERICAN HERITAGE COMMISSION

915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
e-mail: da_nahc@pacbell.net



November 16, 2007

Andrew Chen
Environmental Analyst
AMEC Earth and Environmental

FAX to: 805-966-1706
Number of pages: 3

Re: Proposed Southern California Logistics Airport near Adelante in the Victor Valley; San Bernardino County.

Dear Mr. Chen:

The Native American Heritage Commission was able to perform a record search of its Sacred Lands File (SLF) for the affected project area. The SLF failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the Sacred Lands File does not guarantee the absence of cultural resources in any 'area of potential effect (APE).'

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries once a project is underway. Enclosed are the nearest tribes that may have knowledge of cultural resources in the project area. A List of Native American contacts are attached to assist you. The Commission makes no recommendation of a single individual or group over another. It is advisable to contact the person listed; if they cannot supply you with specific information about the impact on cultural resources, they may be able to refer you to another tribe or person knowledgeable of the cultural resources in or near the affected project area (APE).

Lack of surface evidence of archeological resources does not preclude the existence of archeological resources. Lead agencies should consider avoidance, as defined in Section 15370 of the California Environmental Quality Act (CEQA) when significant cultural resources could be affected by a project. Also, Public Resources Code Section 5097.98 and Health & Safety Code Section 7050.5 provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery. Discussion of these should be included in your environmental documents, as appropriate.

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,

Dave Singleton
Program Analyst

Attachment: Native American Contact List

**Native American Contacts
San Bernardino County
November 16, 2007**

Cahuilla Band of Indians
Anthony Madrigal, Jr., Interim-Chairperson
P.O. Box 391760 Cahuilla
Anza , CA 92539
tribalcouncil@cahuilla.net
(951) 763-2631

(951) 763-2632 Fax

Ramona Band of Mission Indians
Joseph Hamilton, vice chairman
P.O. Box 391670 Cahuilla
Anza , CA 92539
admin@ramonatribes.com
(951) 763-4105
(951) 763-4325 Fax

San Manuel Band of Mission Indians
Henry Duro, Chairperson
26569 Community Center Drive Serrano
Highland , CA 92346
(909) 864-8933
(909) 864-3724 - FAX
(909) 864-3370 Fax

Chemehuevi Reservation
Charles Wood, Chairperson
P.O. Box 1976 Chemehuevi
Chemehuevi Valley , CA 92363
chemehuevit@yahoo.com
(760) 858-4301
(760) 858-5400 Fax

Fort Mojave Indian Tribe
Tim Williams, Chairperson
500 Merriman Ave Mojave
Needles , CA 92363
(760) 629-4591
(760) 629-5767 Fax

San Fernando Band of Mission Indians
John Valenzuela, Chairperson
P.O. Box 221838 Fernandeno
Newhall , CA 91322 Tataviam
tsen2u@msn.com Serrano
(661) 753-9833 Office Vanyume
(760) 885-0955 Cell Kitanemuk
(760) 949-1604 Fax

AhaMaKav Cultural Society, Fort Mojave Indian Tribe
Linda Otero, Director
P.O. Box 5990 Mojave
Mohave Valley , AZ 86440
ahamakav@citlink.net
(928) 768-4475
(928) 768-7996 Fax

Morongo Band of Mission Indians
Britt W. Wilson, Cultural Resources-Project Manager
49750 Seminole Drive Cahuilla
Cabazon , CA 92230 Serrano
britt_wilson@morongo.org
(951) 755-5206
(951) 755-5200/323-0822-cell
(951) 922-8146 Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native American with regard to cultural resources for the proposed Southern California Logistics Airport near Adelanto in the Victor Valley; San Bernardino County, California for which a Sacred Lands File search and Native American Contacts list were requested.

Native American Contacts
San Bernardino County
November 16, 2007

San Manuel Band of Mission Indians
Ann Brierty, Environmental Department
101 Pure Water Lane Serrano
Highland, CA 92346
abrierty@sanmanuel-nsn.gov
(909) 863-5899 EXT-4321

(909) 862-5152 Fax

Serrano Nation of Indians
Goldie Walker
6588 Valeria Drive Serrano
Highland, CA 92346
(909) 862-9883

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native American with regard to cultural resources for the proposed Southern California Logistics Airport near Adelanto in the Victor Valley, San Bernardino County, California for which a Sacred Lands File search and Native American Contacts list were requested.



Mojave Desert Air Quality Management District

14306 Park Avenue, Victorville, CA 92392-2310

760.245.1661 • fax 760.245.2699

Visit our web site: <http://www.mdaqmd.ca.gov>

Eldon Heaston, Executive Director

December 19, 2007

Mr. Andrew Chen
AMEC Earth and Environmental, Inc.
104 West Anapamu Street, Suite 204A
Santa Barbara, CA 93101

MQ-1 Launch & Recovery Element Training Operations at SCLA

Dear Mr. Chen:

The Mojave Desert Air Quality Management District (District) has received the Draft Environmental Assessment for an action which provides infrastructure and operational support functions necessary to conduct the launch and recovery element of the Predator unmanned aerial vehicle training mission assigned to the 163 RW of the California Air National Guard (ANG). This proposed action calls for the unit to establish a schoolhouse and training program that will produce qualified Predator crews for both the US Air Force and ANG.

The District has reviewed the Draft Environmental Assessment for the project and concurs with the analysis and findings. Based on this information, the District has no comments.

Thank you for the opportunity to review this planning document. If you have any questions regarding this letter, please contact me at (760) 245-1661, extension 6726, or Tracy Walters at extension 6122.

Sincerely,

A handwritten signature in black ink, appearing to read "Alan J. De Salvio". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

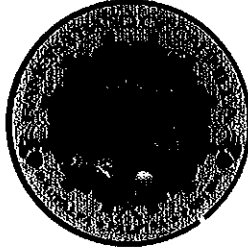
Alan J. De Salvio
Supervising Air Quality Engineer

TW/AJD

CA ANG SCLA

RAMONA BAND OF CAHUILLA

56310 Highway 371, Suite B
Post Office Box 391670
Anza, California 92539



Tel: (951) 763-4105
Fax: (951) 763-4325
E-mail: admin@ramonatribe.com

"A SOVEREIGN NATION"

December 19, 2007

AMEC
104 West Anapamu St., Ste. 204A
Santa Barbara, CA 93101

Re: Ramona Band of Cahuilla Chairman Status/
Correct Mailing Address/
Correct Name of the Tribe

To Whom It May Concern:

Please make note as of October 29, 2007 Manuel Hamilton has resigned as Tribal Chairman and is now Tribal Vice-Chairman. Joseph Hamilton is the new Tribal Chairman for the tribe and looks forward to working with all departments within your organization.

Please also note all correspondences should be mailed to the Post Office Box located in the upper left hand corner of our letterhead.

The correct name for the tribe is: **RAMONA BAND OF CAHUILLA**
Please discontinue any of the following names that may have been previously used.

Ramona Village
Ramona Band of Mission Indians
Ramona Band of Indians
Ramona Band of Cahuilla Indians

Please do not hesitate to give us a call should you have any questions.
Thank you for your time and consideration in this matter.

Sincerely,

A handwritten signature in cursive script, appearing to read "Vanessa Odom".
Vanessa Odom, Tribal Staff
Ramona Band of Cahuilla



California Regional Water Quality Control Board Lahontan Region



Linda S. Adams
Secretary for
Environmental Protection

Victorville Office
14440 Civic Drive, Suite 200, Victorville, California 92392
(760) 241-6583 • Fax (760) 241-7308
<http://www.waterboards.ca.gov/lahontan>

Arnold Schwarzenegger
Governor

December 20, 2007

File: Environmental Doc Review
San Bernardino County

Mr. Robert Dogan
National Guard Bureau
3500 Fetchett Avenue
Andrew Air Force Bureau, MD 20762

COMMENTS ON THE ENVIRONMENTAL ASSESSMENT FOR MQ-1 LAUNCH AND RECOVERY ELEMENT, TRAINING OPERATIONS AT SOUTHERN CALIFORNIA LOGISTICS AIRPORT, LOCATED ON AIR EXPRESSWAY AND PHANTOM STREET, IN THE CITY OF VICTORVILLE

Please refer to the items checked for staff comments on the above-referenced project:

- [X] The site plan for this project does not specifically identify features for the post-construction period that will control stormwater on-site or prevent pollutants from non-point sources from entering and degrading surface or ground waters. The foremost method of reducing impacts to watersheds from urban development is "Low Impact Development" (LID), the goals of which are maintaining a landscape functionally equivalent to predevelopment hydrologic conditions and minimal generation of nonpoint source pollutants. LID results in less surface runoff and potentially less impacts to receiving waters. Principles of LID include:
- Maintaining natural drainage paths and landscape features to slow and filter runoff and maximize groundwater recharge,
 - Reducing the impervious cover created by development and the associated transportation network, and
 - Managing runoff as close to the source as possible.

We understand that LID development practices that would maintain aquatic values could also reduce local infrastructure requirements and maintenance costs, and could benefit air quality, open space, and habitat. Planning tools to implement the above principles and manuals are available to provide specific guidance regarding LID.

We request you require these principles to be incorporated into the proposed project design. We request natural drainage patterns be maintained to the extent feasible. Future development plans should consider the following items:

- [X] The project requires development of a Stormwater Pollution Prevention Plan and
- ☒ a NPDES General Construction Stormwater Permit and/or
 - ☒ a NPDES General Industrial Stormwater Permit

These permits are accessible on the State Board's Homepage (www.waterboards.ca.gov). Best Management Practices must be used to mitigate

California Environmental Protection Agency

project impacts. The environmental document must describe the mitigation measures or Best Management Practices.

- [X] The proposal does not provide specific information on how impacts to surface Waters of the State and/or Waters of the U.S. will be mitigated. These surface waters include, but are not limited to, drainages, streams, washes, ponds, pools or wetlands. Waters of the State or Waters of the U.S. may be permanent or intermittent. Waters of the State may include waters determined to be isolated or otherwise non-jurisdictional by the Army Corps of Engineers. The Environmental Document needs to quantify these impacts. Discuss purpose of project, need for surface water disturbance, and alternatives (avoidance, minimize disturbances and mitigation). Mitigation must be identified in the environmental document including timing of construction.

Mitigation must replace functions and values of wetlands lost. For more information see the Lahontan Region Basin Plan
http://www.waterboards.ca.gov/lahontan/BPlan/BPlan_Index.htm.

[X] Other

- Please include both pre-construction and post construction stormwater management and best management practices (BMP) as part of planning process.
- Please consider designs that minimize impervious surface, such as permeable surface parking areas, directing runoff onto vegetated areas using curb cuts and rock swales, etc., and infiltrating runoff as close to the source as possible to avoid forming erosion channels. Design features should be incorporated to ensure that runoff is not concentrated by the proposed project. The project must incorporate measures to ensure that stormwater generated by the project is managed on-site both pre-and post construction. Please show on plan drawings the on-site stormwater control measures.
- If the proposed project is located in an area that contains drainages, wetlands, Waters of the State, Waters of the U.S. or blue-line stream, we request that measures be incorporated into the project to avoid these areas and provide buffer zones where possible. Please inform project proponent to consult with Army Corps of Engineers, Department of Fish and Game, and the Water Board prior to issuing a grading permit.
- Please map and delineate any wetlands and other surface Waters of the State and Waters of the U.S. (see above for definitions of surface Waters of the State and Waters of the U.S.).
- Please consider development features that span the drainage channels or allow for broad crossings. Design features of future development should be incorporated to ensure that runoff is not concentrated by the proposed project, thereby causing downstream erosion.
- If the proposed project impacts and alters drainages, then we request that the project to be designed such that it would maintain existing drainage features and patterns to the extend feasible. Please inform project proponent to consult with Army Corps of

Engineers, Department of Fish and Game, and the Water Board prior to issuing a grading permit.

Please note that obtaining a permit and conducting monitoring does not constitute adequate mitigation. Development and implementation of acceptable mitigation is required.

If you have any questions, please contact me at (760) 241-7376, or e-mail me at mhakakian@waterboards.ca.gov

Sincerely,



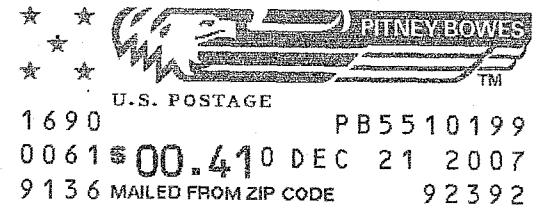
Mack Hakakian, PG
Engineering Geologist

MH/rc/CEQA comments/Victorville MQ-1 Launch & Recovery Training Center



Cal/EPA

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION
VICTORVILLE BRANCH OFFICE
14440 CIVIC DRIVE, SUITE 200
VICTORVILLE, CA 92392

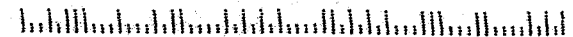


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Mr. Robert Dogan
National Guard Bureau
3500 Fetchett Avenue
Andrew Air Force Bureau, MD 20762

2076285157 0095





Linda S. Adams
Secretary for
Environmental Protection



Department of Toxic Substances Control

Maureen F. Gorsen, Director
5796 Corporate Avenue
Cypress, California 90630



Arnold Schwarzenegger
Governor

January 4, 2008

Mr. Robert Dogan
National Guard Bureau
3500 Fetchett Avenue
Andrews Air Force Base 20762

DRAFT ENVIRONMENTAL ASSESSMENT (EA) FOR MQ-1 LAUNCH AND RECOVERY
ELEMENT TRAINING OPERATIONS AT SOUTHERN CALIFORNIA LOGISTICS AIRPORT
(SCH #2007124002)

Dear Mr. Dogan:

The Department of Toxic Substances Control (DTSC) has received your submitted document for the above-mentioned project. As stated in your document: "Proposed project would consist of the lease of a 1.67 acre parcel at Southern California Logistics Airport (SCLA) for the establishment of a Launch and Recovery Element training site for a Predator unmanned aerial vehicle training mission that would be implemented by the 163rd Reconnaissance Wing (163 RW), a California Air National Guard unit. Ultimately at SCLA, a 25,000 square foot purpose-built facility, meeting requirements for hangar, administrative, and classroom space would be constructed. Until the construction of a purpose-built facility, the 163 RW would lease an existing hangar facility and utilize 2 to 3 modular buildings for office, administrative, and classroom space. No charges to personal levels would result from or be required to facilitate the proposed action."

Based on the review of the submitted document DTSC has the following comments:

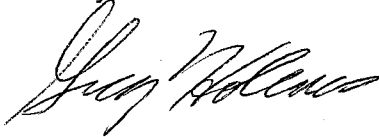
- 1) If buildings or other structures, asphalt or concrete-paved surface areas are being planned to be demolished, an investigation should be conducted for the presence of other related hazardous chemicals, lead-based paints or products, mercury, and asbestos containing materials (ACMs). If other hazardous chemicals, lead-based paints or products, mercury or ACMs are identified, proper precautions should be taken during demolition activities. Additionally, the contaminants should be remediated in compliance with California environmental regulations and policies.
- 2) The project construction may require soil excavation and soil filling in certain areas. Appropriate sampling is required prior to disposal of the excavated soil. If the soil is contaminated, properly dispose of it rather than placing it in another location. Land Disposal Restrictions (LDRs) may be applicable to these soils. Also, if the project

proposes to import soil to backfill the areas excavated, proper sampling should be conducted to make sure that the imported soil is free of contamination.

- 3) If during construction/demolition of the project, soil and/or groundwater contamination is suspected, construction/demolition in the area should cease and appropriate health and safety procedures should be implemented. If it is determined that contaminated soil and/or groundwater exist, the ND should identify how any required investigation and/or remediation will be conducted, and the appropriate government agency to provide regulatory oversight.
- 4) Envirostor (formerly CalSites) is a database primarily used by the California Department of Toxic Substances Control, and is accessible through DTSC's website. DTSC can provide guidance for cleanup oversight through an Environmental Oversight Agreement (EOA) for government agencies, or a Voluntary Cleanup Agreement (VCA) for private parties. For additional information on the EOA please see www.dtsc.ca.gov/SiteCleanup/Brownfields, or contact Maryam Tasnif-Abbasi, DTSC's Voluntary Cleanup Coordinator, at (714) 484-5489 for the VCA.
- 5) In future CEQA documents please provide the following additional contact information: contact person's title and e-mail address.

If you have any questions regarding this letter, please contact
Ms. Eileen Khachatourians, Project Manager, at (714) 484-5349.

Sincerely,



Greg Holmes
Unit Chief
Southern California Cleanup Operations Branch - Cypress Office

cc: Governor's Office of Planning and Research
State Clearinghouse
P.O. Box 3044
Sacramento, California 95812-3044

Mr. Guenther W. Moskat, Chief
Planning and Environmental Analysis Section
CEQA Tracking Center
Department of Toxic Substances Control
P.O. Box 806
Sacramento, California 95812-0806

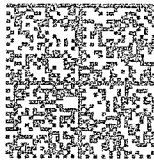
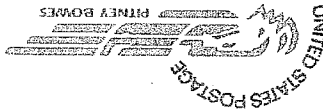
CEQA # 1992

STATE OF CALIFORNIA
DEPARTMENT OF TOXIC SUBSTANCES CONTROL
SOUTHERN CALIFORNIA REGION
5796 CORPORATE AVENUE
CYPRESS, CA 90630



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Mr. Robert Dogan
National Guard Bureau
3500 Fetchett Avenue
Andrews Air Force Base 20762



ARNOLD SCHWARZENEGGER
GOVERNOR

STATE OF CALIFORNIA
GOVERNOR'S OFFICE of PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT



CYNTHIA BRYANT
DIRECTOR

January 9, 2008

Robert Dogan
National Guard Bureau
3500 Fetchett Avenue
Andrews Air Force Base, CA 20762

Subject: MQ-1 Launch and Recovery Element Training Operations at Southern California Logistics
Airport
SCH#: 2007124002

Dear Robert Dogan:

The State Clearinghouse submitted the above named Environmental Assessment to selected state agencies for review. The review period closed on January 8, 2008, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Terry Roberts
Director, State Clearinghouse

**Document Details Report
State Clearinghouse Data Base**

SCH# 2007124002
Project Title MQ-1 Launch and Recovery Element Training Operations at Southern California Logistics Airport
Lead Agency U.S. Air National Guard

Type EA Environmental Assessment

Description Proposed project would consist of the lease of a 1.67-acre parcel at Southern California Airport (SCLA) for the establishment of a Launch and Recovery Element training site for a Predator unmanned aerial vehicle training mission that would be implemented by the 163rd Reconnaissance Wing (163 RW), a California Air National Guard unit. Ultimately at SCLA, a 25K-sf purpose-built facility, meeting requirements for hangar, administrative, and classroom space would be constructed. Until the construction of a purpose-built facility, the 163 RW would lease an existing hangar facility and utilize 2 to 3 modular buildings for office, administrative, and classroom space. No changes to personnel levels would result from or be required to facilitate the proposed action.

Lead Agency Contact

Name Robert Dogan
Agency National Guard Bureau
Phone 301-836-8859 **Fax**
email
Address 3500 Fetchett Avenue
City Andrews Air Force Base **State** CA **Zip** 20762

Project Location

County San Bernardino
City Victorville
Region
Cross Streets Air Expressway and Phantom Street
Parcel No.
Township 6N **Range** 5W **Section** 23 **Base** SBB&M

Proximity to:

Highways 395 and 247
Airports SCLA
Railways BNSF, UPRR
Waterways Mojave River
Schools 2 Elementary Schools; 1 Middle School
Land Use Airport Development District/Industrial

Project Issues Aesthetic/Visual; Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Economics/Jobs; Flood Plain/Flooding; Geologic/Seismic; Noise; Population/Housing Balance; Schools/Universities; Soil Erosion/Compaction/Grading; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wildlife; Landuse; Cumulative Effects

Reviewing Agencies Resources Agency; Department of Conservation; Department of Fish and Game, Region 6; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; Office of Emergency Services; Caltrans, Division of Aeronautics; California Highway Patrol; Caltrans, District 8; Air Resources Board, Airport Projects; Regional Water Quality Control Bd., Region 6 (Victorville); Department of Toxic Substances Control; Native American Heritage Commission

Date Received 12/18/2007 **Start of Review** 12/18/2007 **End of Review** 01/08/2008

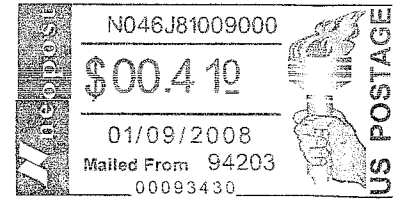
State of California

GOVERNOR'S OFFICE OF PLANNING AND RESEARCH

STATE CLEARINGHOUSE

P.O. BOX 3044

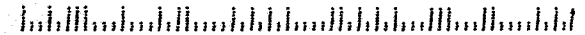
SACRAMENTO, CALIFORNIA 95812-3044



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Robert Dogan
National Guard Bureau
3500 Fetchett Avenue
Andrews Air Force Base, CA 20762

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**OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION**

P.O. BOX 942896
SACRAMENTO, CA 94296-0001
(916) 653-6624 Fax: (916) 653-9824
calshpo@ohp.parks.ca.gov
www.ohp.parks.ca.gov



January 16, 2008

In reply refer to: USAF071219A

Harry A. Knudsen
Chief, Natural Infrastructure Management Branch
United States Department of the Air Force
Air National Guard
NGB/A7CVN
Conaway Hall
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Re: Establishment of a Launch and Recovery Element, Predator Unmanned Aerial Vehicle Training, Southern California Logistics Airport, San Bernardino County, California

Dear Mr. Knudsen:

Thank you for your letter of 2 July 2007 requesting my review and comment with regard to the referenced undertaking. You are consulting with me in order to comply with Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. 470f), as amended, and its implementing regulation at 36 CFR Part 800.

The US Air Force, California Air National Guard is proposing to develop facilities at the Southern California Logistics Airport (former George Air Force Base) to support the Predator Unmanned Aerial Vehicle training program for the 163d Reconnaissance Wing. The Air Force has surveyed the project area and has determined that no historic properties will be affected by the proposed undertaking. Based on documentation included with your letter, I agree that a finding of no historic properties affected, as defined in 36 CFR § 800.4(d)(1), is appropriate.

Thank you for seeking my comments and considering historic properties as part of your project planning. Please be advised that under certain circumstances, such as unanticipated discovery or a change in project description, the Air Force may have additional future responsibilities for this undertaking under 36 CFR Part 800. If you have any questions or concerns, please contact David Byrd, Project Review Unit historian, at (916) 653-9019 or at dbyrd@parks.ca.gov.

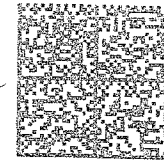
Sincerely,

Susan K Shattox for

Milford Wayne Donaldson, FAIA
State Historic Preservation Officer



State of California • The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
P.O. Box 942896
Sacramento, CA 94296-0001



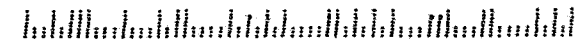
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Harry A. Knudsen
Chief, Natural Infrastructure Management Branch
United States Department of the Air Force
Air National Guard
NGB/A7CVN
Conaway Hall
3500 Fetchet Avenue
Andrews AFB. MD 20762-5157



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from USFWS :

-----Original Message-----

From: Ray_Bransfield@fws.gov [mailto:Ray_Bransfield@fws.gov]

Sent: Wednesday, January 23, 2008 10:01 AM

To: London, Katie

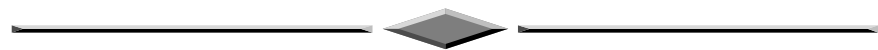
Subject: EA for SCLA Air National Guard MQ1

Katie,

We received the referenced EA. Given our workload, we did not have to review it. Therefore, we will not be providing any comments on this document.

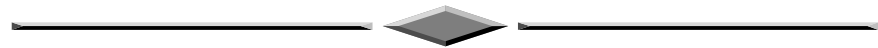
If you have any questions, please contact me at 805 644-1766, extension 317.

Raymond Bransfield
Senior Biologist



APPENDIX B

AIR EMISSION FACTORS AND ASSUMPTIONS



Appendix B

Combustion Emissions Associated with Construction Activities

Emission Factors

Equipment	Days	Hours of Operation	Emission Factors (tons/hr)				
			CO	NO _x	PM ₁₀	SO _x	ROG
grader	60	600	0.567	1.623	0.084	0.276	0.148
Loader	60	600	0.424	0.858	0.086	0.115	0.132
bobcat	60	600	0.268	0.508	0.054	0	0.09
dozer	60	600	1.209	3.037	0.123	0.453	0.232
paving equipment	60	600	0.419	0.961	0.069	0.144	0.117
paver	60	600	0.449	0.894	0.067	0.165	0.12

Assumptions: 12 week construction period, 5 work days per week, 10 hours per work day, 600 hours of operation total, excavation not required for construction.

Combustion Emission Associated with MQ-1 Operations

Emission Factors

	CO	VOC	NO _x	SO _x	PM ₁₀
lbs/LTO	17.21	0.28	0.02	0	0.02
lbs/TGO	14.46	0.19	0.02	0	0.01
lbs/hour of intermediate power	65.9	0.82	0.26	0.01	0.07

Notes: LTO- Landing and takeoff event

TGO- Touch-and-go event

Source: USAF 2003

Assumptions for MQ-1 emissions during support of flying mission training: 200 sorties per year (50 weeks/year, 4 days/week, 1 sortie/day), 1 LTO per sortie, and 0.8 hours of intermediate flying time per sortie (approximately 30 nm to/from R-2515 at an average airspeed of 75 knots/hr).

Assumptions for MQ-1 emissions during LRE training: 32 sorties per year (8 weeks/year, 4 days/week, 1 sortie/day), approximate average sortie duration of 5 hours (including 4 hr/sortie of pattern work), 30 touch-and-go events per sortie (approximately 8 minutes per pattern), 1 LTO per sortie, and 1.5 hours of intermediate power for flying time per sortie.

Assumptions for Chase plane emissions during support of flying training mission: same emission factors as MQ-1 (similar engines), 200 sorties per year, 1 LTO per sortie, and 0.8 hours of intermediate power per sortie.

Assumptions for Chase plane emissions during LRE training: same emission factors as MQ-1 (similar engines), 32 sorties per year, 1 LTO per sortie, and 5 hours of intermediate power per sortie.